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Executive Summary

Ensuring that public policies cater for sustainable, accessible and adequate retirement incomes now and in the future remains a priority for the EU. While Member States share similar fundamental challenges there are considerable differences in the timing of demographic ageing, the design of pension arrangements, the growth potential and in constraints on account of the fiscal situation and external competitiveness. The projected increase in public spending due to population ageing poses an important challenge to EU Member States. Policy action to improve the long term sustainability of public finances while ensuring adequacy of pensions is crucial.

A - CHALLENGES AND ACHIEVEMENTS

(1) People today are healthier and live longer than ever in history. At the same time they have fewer children than they used to.

Over the last decades, life expectancy has steadily been rising, with an increase of up to two and a half years per decade. If reduction of mortality continues at this pace, most people in the EU will live very long lives. This would mean life expectancy at birth for men would increase by 8.5 years and by 6.9 years for women over the next fifty years. Fertility rates have decreased in almost all Member States and in some they have remained very low. The combination of rising longevity and lower fertility will lead to a steep aggravation of the old age dependency ratio. The size of the working-age population is projected to shrink and this will reduce potential labour supply and economic growth. This will have far-reaching consequences for economic, budgetary and social developments.

(2) Faced by a strong increase in the old age dependency ratio, most Member States have over the last decade reformed their pension systems to retain sustainability as well as adequacy and to ensure fairness between and within generations and between men and women. Reforms have brought important progress, notably in sustainability for public pension schemes, and to varying degrees also in some aspects of adequacy and minimum income provisions for older people in particular.

The adopted reforms considerably limit the growth in projected public pension expenditure over the long-term, as appears from the 2009 Ageing Report. Thereby reforms may greatly improve the ability of public schemes to continue to provide adequate pension benefits in a sustainable manner. Nonetheless, public pension expenditure in the EU as a whole is projected to rise by 2 ½ p.p. of GDP by 2060, which equals an increase of 23% on average of public pension expenditure, and in some Member States substantially more.

Improvements in sustainability largely result from closer links between contributions and benefit accruals, actuarial adjustment mechanisms and changes to valorisation and

indexation rules, which as shown by the December 2009 ISG-SPC report¹ tend to reduce the earnings-related replacement rates for people retiring at the same age as today.

With many reforms the challenge in public pension delivery increasingly turns to achieving adequate replacement levels while ensuring sustainability. Reforms of public schemes usually contain measures to raise replacement rates through extension of working life and in several Member States new or expanded supplementary pension schemes have opened additional possibilities for many people to compensate for limitations in public provision through greater savings and the build-up of additional entitlements.

Many reforms have resulted in wider coverage (e.g. inclusion of farmers, self employed, women with low entitlements etc.) and better fit with gender roles (e.g. crediting of caring years) and changing labour markets, though some problems still need to be addressed (e.g. atypical careers and short term contracts). The shift from best years towards career average as calculation base for earnings-related pension schemes in many Member States has enhanced their intra-generational fairness and sustainability.

Changes adopted have also pertained to pensions currently in payment. Several reforms have led to increases in minimum pensions and supplementary allowances.

Underpinned by restrictions on early retirement and stronger work incentives, periods of high labour demand and changes in the characteristics of the 55-59 year olds have resulted in higher employment rates of older workers thus reversing long standing trends towards earlier retirement.

(3) Recognizing the progress, the challenge of adapting the pension systems in some of the EU Member States to expected demographic changes is still very real. Additional reforms of pension policy will be needed in several countries. Furthermore, there are signs that ongoing reforms might bear considerable risks in terms of both adequacy and sustainability. As changes in pension systems will tend to make benefits more contingent on developments in labour and financial markets, important risks relate to employment rates not increasing enough or capital markets not delivering as expected. Budgetary consolidation, which is more urgent after the economic crisis, is essential in order to reduce public debt and to contribute to financing the future increase in public pension expenditure.

In many Member States reforms are changing pension systems from largely single tier to truly multi-tier systems. In most Member States, the bulk of pension income will continue to be provided by public pay-as-you-go schemes. As the role of funded and defined-contribution pensions grows and public pensions increasingly become based on life-time earnings-related contributions, future pension adequacy will increasingly rest on good economic performance, the ability of labour markets to provide opportunities for longer and less interrupted contributory careers, a strengthened relationship between contributions and benefits in pension systems, and a combination of safe and appropriate returns from financial markets.

¹ For more detailed information see the report "Updates of current and prospective theoretical pension replacement rates 2006-2046",
<http://ec.europa.eu/social/main.jsp?langId=en&catId=752&newsId=551&furtherNews=yes>

Moreover, there are considerable risks remaining. In some Member States additional reforms of pension policy will be needed in view of the scale of demographic changes ahead. For several countries where the pension reform process has not been set sufficiently in motion, there is an urgent need to review the 'pension promise' in view of what the rest of the economy can be expected to support. For some other countries, additional measures might be needed to ensure the lasting success of reforms already implemented.

B - REMAINING RISKS AGGRAVATED BY THE ECONOMIC CRISIS

(4) Sustainability and adequacy concerns for all types of pension schemes have been aggravated by the crisis. Lower growth prospects and increasing deficit and debt affect sustainability. Regarding adequacy, today's pensioners have generally been well-protected against the crisis, but pensions may be affected by unemployment periods and lower contributions and poorer returns in financial markets. The crisis has an impact on the currently active population, and thus on the accumulation of pension rights, notably for younger generations.

With secure incomes from public pensions, which have been allowed to perform their role as automatic stabilisers, current pensioners have so far been among the population groups least affected by the crisis. Exceptions apart, benefits from funded schemes still play only a marginal role in the pensions of retired Europeans and just a few Member States with very acute public budget problems have had to adjust public pensions in payment. In several Member States, funded schemes will be much more important for benefit delivery in the future.

The crisis has strongly reduced the market value of pension fund assets and it has led to a sharp deterioration in public finances, which to varying degrees is putting stress on public spending for pension provision. After the steep tumble in financial markets prices in 2008, many pension funds have been able to recoup some of their losses in 2009² and early 2010. This should be seen against the background of the scale of fiscal deterioration as a result of the crisis which, expressed in terms of debt, represents nearly 20% of GDP, which will severely constrain public pension provision. This, in combination with pre-existing weaknesses and imbalances implies that there will be an unprecedented need for coordinated fiscal consolidation.

(5) The crisis has highlighted the need to review the degree of financial market exposure and the design of risk sharing in funded pensions.

The trend observed in some Member States towards more private sector funded pension provision can help reduce explicit public finance liabilities, but it also creates new challenges and forms of risks. Variations in the ability of funded schemes to weather the present crisis show that differences in design, regulation and investment strategy matter. Achieving a better balance for pension savers and pension providers between risks, security and returns will be key to enhance public confidence in funded pensions and ensure their contribution to adequacy of retirement incomes.

² See OECD "Pension Markets in Focus". October 2009, Issue 6.

C - AGGRAVATED CHALLENGES AND PROSPECTS

(6) Adequacy and sustainability are two faces of the same coin. In general, people need to work more and longer to ensure both.³ There is no one-size-fits-all solution to pension delivery: all systems have pros and cons and all need to adapt to long-term demographic and economic trends. The challenge for policy makers is to aim for a good balance between sustainability and adequacy. The crisis and possible lower economic growth will make this harder and more urgent. It is therefore vital to strengthen awareness of available routes to adequate income in retirement. Transparency and information are essential to gain public trust and guide behaviour. To fully ascertain the balance between adequacy and sustainability in pension systems, better coordinated work at EU level on measurements and data will be needed.

The overall framework agreed by the Stockholm European Council – the three-pronged strategy of: (i) reducing debt at a fast pace; (ii) raising employment rates and productivity; and, (iii) reforming pension, health care and long-term care systems – for coping with the challenge posed by ageing populations remains valid and progress on each of the three pillars will be indispensable. Nevertheless, in some countries the crisis has increased the urgency to modernise pension policies using a holistic approach. Budgetary consolidation and attaining the medium-term budgetary objectives is essential in order to reduce public debt and to contribute to financing the future increase in public pension expenditure.

The crisis will affect all pension designs. It has revealed some weaknesses in certain aspects of reformed systems that will need to be addressed, in particular, the role of funded schemes and the interaction between public and private pillars.

The crisis has also highlighted that economic growth, employment, good regulation of financial markets solidarity and fairness between and within generations are interlinked key components of pension policy. Macroeconomic stability and well-functioning labour and financial markets are needed for pension systems to work well. Reducing structural unemployment would bring major benefits.

Without working longer, the adequacy-sustainability balance will be difficult to reach. Many pension reforms on their own would reduce annual replacement rates unless people work more and longer. People need to be made aware of possibilities for raising their level of retirement income through the build up of supplementary pensions and extra entitlements, while having access to appropriate information on the various related risks. The crisis adds to the need for policy-makers to provide stability by being transparent on pension policy, on the routes that are and will be available to retirement incomes in the future and to provide guidance, so as to enable people to change their behaviour.

(7) Employment rate improvements over the last decade may come under threat and there is still considerable need for progress. Growth prospects, appropriate work incentives, open labour markets and increasing effective retirement ages are needed to enable more people working more and longer.

Only around 40% of people are still in employment at the age of 60 and female employment rates are still substantially below those of men. This represents a huge

³ People in bad health may require special consideration.

untapped potential and raising the overall employment rates for all, in particular of older workers and women, and thereby increasing effective retirement ages will be a key policy objective for EU Member States. The positive aspects of migration should be fully exploited.

Achieving the necessary extension in working lives in view of continuous gains in life expectancy will prove challenging as adjustments will also be needed in age management in work places and labour markets and in the expectations and behaviour of workers.

Tax/benefit and wage systems could provide financial incentives for people to remain economically active and building their own human capital. Policies to tackle age-discrimination and to promote life-long learning, flexible retirement pathways and healthy job opportunities for older workers would also be needed.

Besides measures concerning the pension systems, governments need to promote opportunities for people to work more and longer and for further developing additional sources of income. Having access to pension schemes which are simple to understand, of low cost and suited to the modern workplace is essential to address the ageing transition. Involving all stakeholders (e.g. the social partners) to achieve this will be important.

1 An introduction to pension reforms

1.1 Pension reforms in the European Union

Over the last 15 years consecutive waves of Member State reforms in response to the challenge of ageing have markedly altered pension systems and pension scheme designs across the Union.

During this period, the EU has sought to underpin this process by providing a framework for policy learning with common objectives conducive to the planning, implementation and assessment of such reforms through the Growth and Jobs strategy (Lisbon process) and the Social Open Method of Coordination. Moreover, the fiscal framework in the EU – the Stability and Growth Pact (SGP) – has been strengthened, including the need for pursuing structural reforms in the field of pensions that contribute to long-term fiscal sustainability.

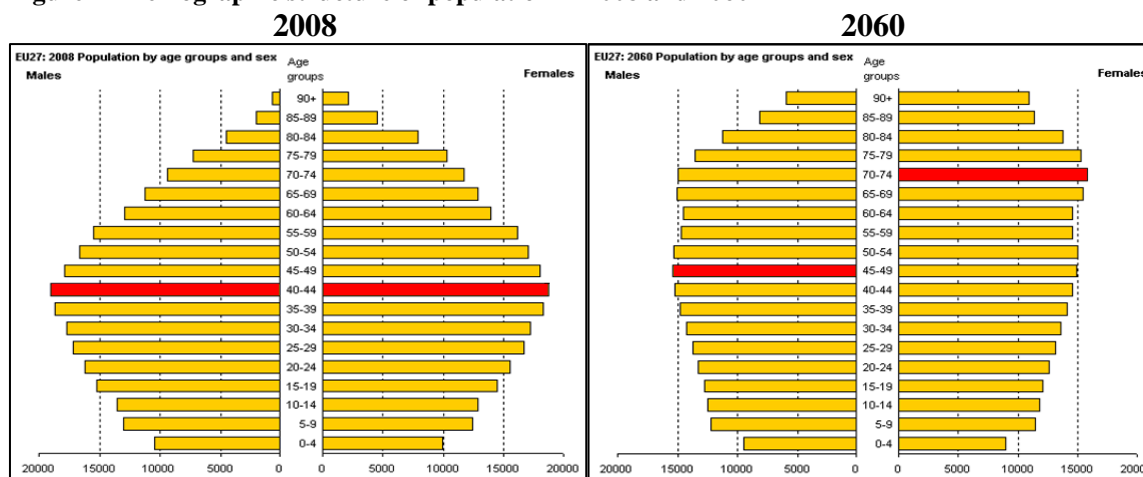
As the Lisbon process is being replaced by the Europe 2020 strategy, it is time to take stock of the progress made. With the financial crisis and the economic downturn, Member States have to revisit achievements and re-assess core responses in the light of the short- and longer-term impacts on the various elements in their pension systems.

Main reasons for pension reforms

The looming challenge of ageing populations and its implications for the ensuring long-term sustainability of public finances alongside with social protection deficiencies have been very effective catalysts for reforms.

In the coming decades, Europe's population will undergo dramatic demographic changes due to low fertility rates, continuous increases in life expectancy and the retirement of the baby-boom generation (see Figure 1 and Figure 2).

Figure 1 - Demographic structure of population in 2008 and 2060

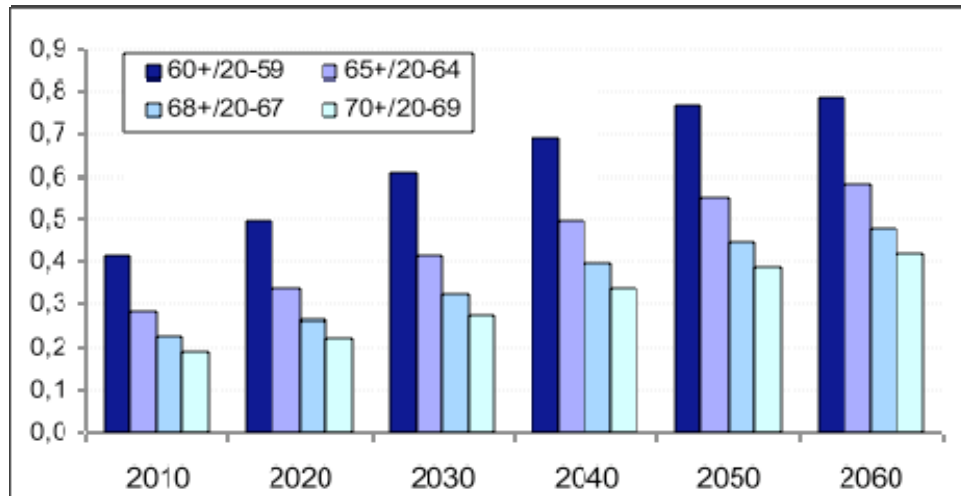


Source: Commission services

Note: the red (dark) bar indicates the most numerous cohort.

Though the exact impact will be determined by several factors, ageing populations will pose major economic, budgetary and societal challenges. It is expected to have a significant impact on economic growth and lead to strong pressures to increase public spending. This will make it difficult for Member States to maintain sound and sustainable public finances in the long-term. Ensuring fiscal sustainability requires keeping the EU's fiscal house in order, which involves addressing budgetary imbalances before the budgetary impact of ageing starts to be felt in earnest.

Figure 2 - Evolution of demographic dependency ratios between 2010 and 2060



Source: Commission services

Pension reforms are challenging because they involve long-term decisions in the face of short-term political pressures. As the need for changes may not be easily understood or fully accepted by citizens, pension reform also tends to be controversial and face considerable political resistance. This may lead to a tendency to postpone reforms, delay when changes take effect and leave problems for the next government(s) and generations to tackle.

In some cases, reforms have altered the fundamental structure of pension provision in one go. In others, reform has been evolutionary, involving a series of small changes over time, but often adding up to substantial changes in the characteristics and workings of schemes.

Pension planners must now expect the vast bulk of people to reach pensionable age and that most of them upon arrival will enjoy ever more years in retirement. They must also calculate with the fact that the number people of working age to people of retirement age will be halved as the baby-boomers over the next decades enter retirement. On demographic trends the share of resources that have to be moved from workers to retirees is therefore set to continue to increase and the task of ensuring sustainability to become steadily tougher.

With an increase in average duration within any pension scheme, pension provision has become far more costly and challenging. This fact will put public finances under severe stress. In order to cater for long term sustainability of public finances reforms of pension systems have been, and in many countries still are, necessary.

The structural growth in female labour force participation and employment rates at all ages have fundamentally altered how pension systems relate to households and individuals.

In labour markets substantial increases in working career mobility, changes in the length and character of contracts, greater flexibility requirements and the enlarged role of earnings as base for social protection contributions and future entitlements have transformed the way pension systems interact with and need to underpin employment objectives.

Key longer term questions that have emerged and to which pension reforms have sought answers are: How should the increases in longevity be divided into work and leisure and how should the costs of longer lives be shared between and within generations given the overall demographic outlook? How can a fairer and more sustainable balance between the number of years people spend in work and in retirement be achieved?

Important reforming efforts have been directed at improving the financing and social protection effectiveness of pensions in payment, i.e. conditions for current pensioners. Member States have used reforms to widen and consolidate the revenue base for present pension expenditure and they have widened coverage to enhance social protection for groups with poor access to pensions. Several have sought to improve intra-generational fairness in benefit calculation while also improving the sustainability of earnings-related pensions.

Many countries have launched measures to improve benefit levels in basic or minimum pensions and other forms of minimum income provision for older people. In some countries better indexing and ad hoc rises have been used to maintain the value of benefits and align them better with the growth in societal wealth. Beyond pensions payments Member States have also raised the reach, quality and availability of benefits in cash or in kind such as housing, heating and personal need allowances or access to social and health services for older people.

Several reforms have aimed at integrating schemes for different sectors and/or at harmonising conditions for various categories of workers as well as for men and women. Simplification and consolidation delivering economies of scale have also been means to achieve common incentive structures, equal treatment and greater equity.

Present pensioners often receive pensions according to several historic sets of partly overlapping rules and pension reforms may only apply fully to the entitlements of the youngest cohorts of present workers. Even when they introduce wholly new structures and rules, pension reforms must make bridges between existing and new provisions. Devising transition rules that allow for the new regime to take effect sufficiently quickly while also respecting existing rights is a difficult balance to achieve. Moreover, reforms securing higher effectiveness and better sustainability in the future do not free policy makers from having to find the means to meet the entitlements and needs of current pensioners.

There are many similarities in the long term challenges and the shorter term problems which Member States have sought to address through reforms. But countries come from different legacies and there is no one-size-fits-all solution or single best pension design

which can be applied. The type of design needs to fit the specific economic, social and demographic characteristics of the population it is meant to serve and the quality of implementation also exerts considerable influence on eventual outcomes. Indeed the country specific needs, means and preferences that determined reforms have produced a rich variation of scheme and system designs.

In the course of events reformers have realised that adequacy and sustainability are two sides of the same coin. One cannot meaningfully have one without the other. What reforms ultimately must strive to achieve is an appropriate balance between the dual goals. Member States have reflected this insight in the common pension objectives they adopted in 2001 and confirmed them in an updated form in 2006 (see the Box: Common objectives for pensions).

Encouraging later retirement would, if entitlements are linked to the length of contributory records, improve both the adequacy of benefits earned and financial sustainability of schemes. Similarly, extending coverage of pensions would broaden the contribution base and raise schemes revenues while also improving the social protection and future retirement benefits of formerly excluded workers.

1.2 *The European framework in support of pension reform*

1.2.1 The Open Method of Coordination (SPSI) and the Laeken objectives

In 2001 Member States agreed a set of objectives for their pension systems which since have guided reform efforts and their assessment at EU level. Member States and the Commission assess progress towards the common objectives within the Open Method of Coordination (OMC) on social protection and social inclusion which has the Social Protection Committee as its pivot. The Social OMC works through common setting of objectives by the Commission and the Council, developing common indicators that measure progress towards objectives, reporting by the Member States on the basis of those objectives, and summarising of the findings by the Commission in an annual report subsequently endorsed by the Council (Joint Report).

The common objectives for pensions are listed in the *Box: Common objectives for pensions*, using the form in which they were confirmed in 2006.

Box: Common objectives for pensions

Member States are committed to providing adequate and sustainable pensions by ensuring:

(1) *adequate* retirement incomes for all and access to pensions which allow people to maintain, to a reasonable degree, their living standard after retirement, in the spirit of solidarity and fairness between and within generations;

(2) the financial *sustainability* of public and private pension schemes, bearing in mind pressures on public finances and the ageing of populations, and in the context of the three-pronged strategy for tackling the budgetary implications of ageing, notably by: supporting longer working lives and active ageing; by balancing contributions and benefits in an appropriate and socially fair manner; and by promoting the affordability and the security of funded and private schemes;

(3) that pension systems are *transparent, well adapted* to the needs and aspirations of women and men and the requirements of modern societies, demographic ageing and structural change; that people receive the information they need to plan their retirement and that reforms are conducted on the basis of the broadest possible consensus.

1.2.2 The three-pronged Stockholm strategy for coping with ageing

Coping with an ageing population is a key policy challenge in the EU. The Stockholm European Council decided in March 2001 that ‘The Council should regularly review the long-term sustainability of public finance, including the expected strains caused by the demographic changes ahead’. Moreover, it decided the policy response should be organised around three pillars:

- reducing debt at a fast pace;
- raising employment rates and productivity; and
- reforming pension, health care and long-term care systems.

Successive European Councils have recognised and confirmed the need to address the implications of ageing populations at European level. In November 2009, the Council stressed that making progress on each of these pillars is indispensable for appropriately addressing the sustainability challenge.⁴ In particular, it underlined the need to return to sustainable fiscal positions starting with the implementation of the agreed principles for the exit strategy endorsed by the Council (ECOFIN) in October 2009, and subsequently moving towards the medium-term budgetary objectives (MTOs). The reduction in debt ratios would have to come from a combination of fiscal consolidation and structural reforms to support potential growth. The Council agreed that at the current juncture it is of particular importance to avoid that cyclical unemployment becomes entrenched. Moreover, regarding social protection systems, comprehensive and adequate reforms, notably of pension systems, can have a substantial positive impact on long-term sustainability and further progress is in the EU Member States.

⁴ See COUNCIL OF THE EUROPEAN UNION, 2972nd Council meeting, Economic and Financial Affairs, Brussels, 10 November 2009, 15572/09 (Presse 319).

1.2.3 The EU's fiscal framework; the Stability and Growth Pact

The assessment of fiscal sustainability is with the 2005 reform of the Stability and Growth Pact (SGP) an integral part of the EU fiscal framework. According to the SGP, long-term issues should be given a prominent role in the EUs multilateral budgetary surveillance. Recently, Member States have agreed detailed principles on the revision of the medium-term budgetary objectives (MTO) in order to ensure that the Member States' budgetary strategies reflect real medium-term needs, by taking account not just of debt levels but also implicit liabilities, notably costs related to ageing populations, in particular projected pension and healthcare expenditure. MTOs can be revised when a major structural reform with impact on the cost of ageing is implemented and in any case every four years preferably after a new set of projections is produced by the Ageing Working Group.⁵

1.2.4 Enhancing consistency in concepts and methods in measuring adequacy and sustainability

Mutual consideration of adequacy and sustainability

The Social Protection Committee (SPC) through the Indicator Sub-Group (ISG) has primarily refined measurements of social adequacy while the Economic Policy Committee (EPC) through the Ageing Working Group (AWG) has primarily developed measurements of fiscal sustainability in relation to notably pension expenditure.

At present, the AWG contributes to improve the quantitative assessment of the long-term sustainability of public finances and economic consequences of ageing populations, so as to assist policy formulation in the context of the SGP and the assessment of the annual Stability and Convergence Programmes (SCP). The ISG currently develops mainly indicators to monitor the common objectives on Social Protection and Social Inclusion in the framework of the Open Method of Coordination (OMC). Since adequacy and sustainability are two sides of the same coin, methodological progress should aim at enhancing consistency in concepts and methods used by the SPC (ISG) and the EPC (AWG) while respecting their specific mandates and agreed procedures in addressing adequacy and sustainability.

⁵ Additionally, pension reforms are taken into account as relevant factor in the context of the Excessive Deficit Procedure. See also European Commission (2010), 'Public Finance Report 2010', forthcoming.

2 A decade of pension reform in the EU

2.1 Major trends in reforms

In both public pay-as-you-go (PAYG) and private funded schemes entitlement has been ever closer linked to the length and the value of contributory records.

First, even though the share will reduce, the bulk of pension income in most Member States will continue to be provided by public PAYG schemes.

Second, reforms have brought several genuine innovations into scheme design. Whether through systemic transformations or a sequence of parametric reforms, Member States have to a large extent developed new hybrid designs. Typically, they have sought to incorporate the better features that used to distinguish public from private and PAYG from funded schemes.

Minimum income provisions for older people and social protection aspects of pension systems have often been improved as schemes and the way they combine have been overhauled.

Along the way earnings-related pension schemes have frequently also become fairer in their intra-generational consequences. Distributional aspects are often covered through minimum income provisions.

Moreover, as many reforms have entailed improved coverage and better adaptation to changes in gender roles and labour markets they have had a positive bearing on overall adequacy and fit with labour market objectives. In this sense reforms have not just improved sustainability in terms of aggregate public budget impact. They have also contributed to improve adequacy as more people will benefit from pensions.

In addition, reforms brought a whole range of innovations that in many constructive ways blurred the old dividing lines between PAYG/funded, public/private and voluntary/obligatory schemes by combining elements from both. As private prefunded pensions have been given a larger role in overall provision they have become subject to far more public scrutiny and regulation and their traditional social protection limitations (partial, regressively skewed coverage; lack of portability; access and vesting rules creating discretionary conditionality; regressive distributional effects) were increasingly reduced or corrected.

A key type of innovation was the establishment of self-balancing mechanisms in the relation between liabilities and revenues, such as linking the contribution-benefit formula and/or the pensionable age to longevity and GDP/wage sum developments. This has added important measures of adaptability to schemes and increased their stability to the ultimate benefit of both social adequacy and financial sustainability concerns.

When trying to review the balance of adequacy and sustainability in reform outcomes prior to the crisis, a picture emerges with an overall mix of trade offs, but also one showing important synergies in intra- and inter-generational win-win potentials. Reforms have also provided incentive for people to work more and longer to generate additional means of income. One important outcome would seem to be greater stability of schemes

in view of known challenges. Finally for some Member States major reforms will still be needed before they fit into this tentatively generalised picture.

2.1.1 Strengthening of contributory principles

From the early 1980's to the early 1990's the earnings-related, defined benefit schemes established by many MS in the 1950's and 1960's began maturing. There was also the extra cost of early retirement, in particular from additional groups which had been included in the schemes often at very good terms. Given that pension schemes were not designed to adapt to changing societal and demographic conditions, the primary policy response was often to increase the contribution rate.

Since the mid-nineties securing adequacy and sustainability by adjusting liabilities to revenues and balancing entitlements far better with contributions became key underlying themes in reforming efforts: the transition from defined-benefit to defined-contribution entitlement formulas.

Increasing the contribution period: from 'best years' to average life-time earnings in income-related schemes

Tightening the link between contributions paid into the system and benefits paid out has been a key feature of reform efforts.

Back in the 1980's the big earnings-related public pension systems in Europe still tended to base their benefit calculations on income in a limited part of working careers, usually from as low as five to twenty years. Several countries have extended — or have embarked on the process of extending — the period of an individual's earnings history that is used for calculating the pension entitlement in the statutory pension schemes.

Basing pensions on a limited number of best or final years tends to be regressive, because the people with final or best years substantially above their lifetime average earnings tend to be those that earn the most. Moreover, in countries with a large informal sector they can give a large incentive to under-report earnings in earlier years and in others they may tend to reinforce systems of steep seniority-based pay.

By moving from final pay or best years to life-time earnings as the basis for benefit calculation and by insisting on a number of contribution years instead of solely on reaching a pensionable age, pension schemes have become more equitable in their distributions between blue and white collar workers with steady employment. But as these changes have been made workers with periods of low income, broken careers and atypical work without (full) pension coverage have become more exposed, unless adequate crediting provisions are provided.

Some countries have extended the qualifying period for a minimum pension in order to strengthen contributory principles and avoid that the effect of a minimum guarantee act as a disincentive to stay in the labour market.

Increasing the pensionable age

In many Member States, there has been an equalisation of pensionable ages between women and men. Some Member States will see such an equalisation in the near future whilst others have longer transitional rules. Some have so far taken no steps in this direction. In some Member States the number of years required to receive a full pension was increased.

Table 1 - Standard pension eligibility age and labour market exit age

Member State	Average exit age from the labour force in 2001	Average exit age from the labour force in 2008	Statutory retirement age for M/W in 2009	Statutory retirement age for M/W in 2020	Further increases in the statutory retirement age for M/W after 2020	Life expectancy at 65 in 2008 (unweighted average for two genders)	Projected increase in life expectancy at 65 between 2008 and 2060 (unweighted average for two genders)
Belgium	56,8	61,6*	65/65	65/65		18,3	5,1
Bulgaria	58,4	61,5	63/60	63/60		14,6	6,9
Czech Republic	58,9	60,6	62/60y8m	63y8m/63y4m	65/65	16,4	6,0
Denmark	61,6	61,3	65/65	65/65	67+/67+***	17,5	5,5
Germany	60,6	61,7	65/65	65y9m/65y9m	67/67	18,5	5,1
Estonia	61,1	62,1	63/61	63/63		15,6	6,5
Ireland	63,2	64,1**	65/65	65/65 (66/66)	(68/68)	18,2	5,6
Greece	61,3°	61,4	65/60	65/60	65/65	18,4	4,9
Spain	60,3	62,6	65/65	65/65		19,0	4,8
France	58,1	59,3	60-65	60/60		19,9	4,5
Italy	59,8	60,8	65/60	65/60****	***	19,5	4,7
Cyprus	62,3	63,5*	65/65	65/65		18,0	5,2
Latvia	62,4	62,7	62/62	62/62		14,9	7,1
Lithuania	58,9	59,9**	62y6m/60	64/63	65/65	15,3	6,7
Luxembourg	56,8	:	65/65	65/65		18,3	5,1
Hungary	57,6	:	62/62	64/64	65/65	15,5	6,8
Malta	57,6	59,8	61/60	63/63	65/65	17,5	5,6
Netherlands	60,9	63,2	65/65	65/65 (66/66)	(67/67)	18,2	5,1
Austria	59,2	60,9*	65/60	65/60	65/65	18,7	4,9
Poland	56,6	59,3*	65/60	65/60		16,5	6,2
Portugal	61,9	62,6*	65/65	65/65		18,1	5,1
Romania	59,8	55,5	63y8m/58y8m	65/60 (65/61y11m)	(65/65)	15,0	6,8
Slovenia	56,6°	59,8**	63/61	63/61 (65/65)		17,6	5,5
Slovakia	57,5	58,7*	62/59	62/62		15,2	6,8
Finland	61,4	61,6*	65/65, 63-68	65/65, (64y8m-68)	65/65, (65-68)	18,6	4,9
Sweden	62,1	63,8	61-67	61-67		18,9	4,8
United Kingdom	62,0	63,1	65/60	65/65	68/68	18,2	5,4
EU 27 average	59,9	61,4				18,2	5,3

Source: Eurostat, MISSOC, Ageing Report.

Note: ° - 2002, * - 2007, ** - 2006, in brackets – proposed, not yet legislated, *** retirement age evolves in line with life expectancy gains over time, introducing flexibility in the retirement provision. **** For Italy 65/65 for civil servants, starting from 2018.

Sweden: guarantee pension is available from the age of 65.

Romania: the National House of Pensions and other Social Insurance Rights.

Several Member States have legislated an increase in the pensionable age for both genders. Yet in most of these countries the higher eligibility ages for a statutory pension will be phased in over a long period and have more effect on younger cohorts (see Table 1). Despite the general trend towards increases in the pensionable age, there are Member States where the pension eligibility age is still relatively low.

A number of Member States have strengthened the bonus-malus system in schemes with delayed and early retirement possibilities. Others have chosen to introduce flexible paths into retirement on an actuarial basis such as minimum pension eligibility age at which old-age pension benefits can be received and rules allowing individuals to take a share of their pension whilst continuing to work part-time.

Experience shows that introducing more flexible retirement provision requires a careful design to ensure the desired results. If the structure of bonus/malus incentives and the focus on a proper target group of workers is badly designed, flexibility may lead to a shortening rather than an extension of working lives.⁶

Key elements in reforms of early exit benefits⁷

Early exit⁸ benefits have been the main element in the path out of the labour market. These include early retirement schemes for certain professions, unemployment and disability benefits, as well as long-term sickness benefits, supplementary pensions and survivors' pensions. Reforms that close or reduce the take-up of these benefits have contributed to longer working lives. The question Member States face is how to restrict the access to the benefits and how to design measures motivating recipients to take up work. In particular reforms have helped to achieve higher employment rates among those aged 55-59 and thus for older workers as a whole.

Recent improvements in the employment situation of those aged 55-64 hide a growing divergence between different groups (men versus women, higher educated versus lower educated). Accordingly, further reforms of early exit routes should also aim to focus on groups with weak improvements in employment rate.

2.1.2 Greater role for pre-funding⁹

Greater pre-funding, in one form or another, has been a widespread policy response to the demographic challenge. In macro-economic terms, pre-funding means bringing forward some of the costs of the demographic shift to distribute them over a longer period and over different generations.

Pre-funding has been enhanced in four ways:

⁶ More analysis in the SPC Study "Promoting longer working lives through pension reforms", 2007&2008, <http://ec.europa.eu/social/main.jsp?catId=752&langId=en&moreDocuments=yes> .

⁷ More in the 2008 SPC Study "Promoting longer working lives through pension reforms. Early exits from the labour market" <http://ec.europa.eu/social/main.jsp?catId=752&langId=en&moreDocuments=yes> .

⁸ Early exit schemes are to be seen as a special category of pathways out of the labour force different from the flexibility provided within some statutory pension schemes.

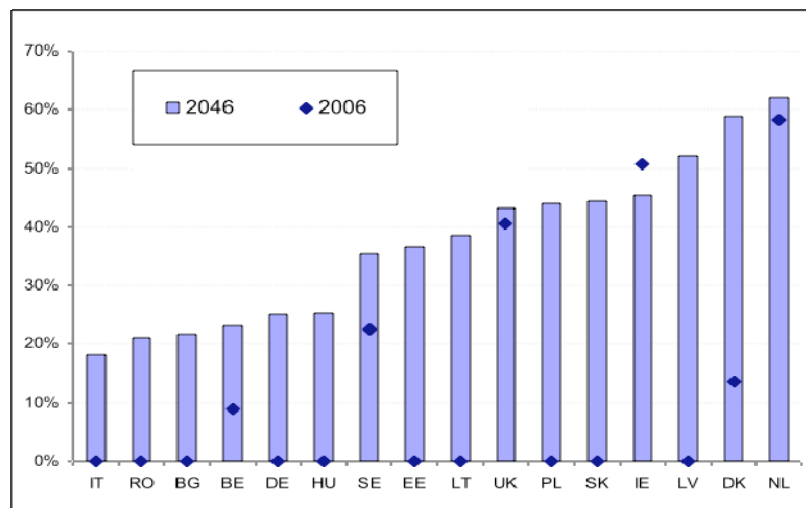
⁹ A more detailed analysis of greater role of pre-funding is presented in the Annex 3.

- introduction of new defined-contribution (DC) schemes (either mandatory, with automatic enrolment or voluntary with tax incentives);
- expansion of existing occupational schemes;
- setting up of pension reserve funds; or,
- paying down of national debt.

The two first represent the most important changes as they imply that funded elements have been given an official role in over all national pension provision. It also means that many Member States have moved from a largely single pillar towards a truly multi-pillar pension system where retirement income will derive from a package of pension elements instead of a single benefit.

Presently funded schemes only play a significant role in a few Member States. But as newly introduced schemes mature they are set to play a major role in the incomes of future pensioners in many countries across the Union (see Figure 3).

Figure 3 - Share of occupational and statutory funded pensions in total gross replacement rates in 2006 and 2046 in selected Member States



Source: ISG 2009 report on Theoretical Replacement Rates

Note: Data available only for a number of Member States

Coverage levels of funded schemes vary greatly depending on the role of the scheme in the overall national pension system: statutory funded, occupational or voluntary pension provision.

2.1.3 Establishment of automatic adjustment or periodic review mechanisms

A number of countries have introduced mechanisms for automatic adjustment or periodic review (see Table 2). To a varying degree they link:

- Life expectancy to pension eligibility or replacement rates,

- Economic performance in terms of GDP growth or labour market performance with valorisation of entitlements or indexation of benefits,
- Balance of the system to valorisation of entitlements or indexation of benefits,
- Contribution rates with indexation of benefits.

The purpose of automatic adjustment mechanisms is to maintain the balance between revenues and liabilities in pension schemes, and intentionally or not, these mechanisms impact on both intergenerational adequacy and sustainability. These mechanisms imply that the financial costs of demographic changes will be shared between generations subject to a rule. Some of them tend to be pro-cyclical, so in times of crisis they can impose social cost, as in some cases they may affect retired people directly.

Given demographic projections, adjustment mechanisms based on changes in life expectancy will have a considerable scope for application in the coming decades (see Table 2). The basic idea behind them is to transfer decision-making from the political arena to the realm of the law.

Table 2 - Automatic adjustment mechanisms in income-related pension systems in Member States

Variable	Dependent value	Member States
Life expectancy	Pension eligibility (pensionable age, required contribution period)	DK, FR, IT
	Replacement rate	Mandatory DC (BG, EE, LV, LT, HU, PL, RO, SE), NDC (IT, LV, PL, SE), DE, PT, FI
GDP growth	Indexation of benefits	HU, PT
GDP growth, labour market	Valorisation of entitlements	NDC (IT, LV, PL, SE)
Balance of the system (labour market, fund's balance)	Valorisation of entitlements	SE
	Indexation of benefits	DE, SE, NL funded DB
Contribution rate	Indexation of benefits	DE

Source: Commission services

Automatic adjustments of contribution rates or indexation are also applied in occupational funded pensions. These mechanisms have been stretched to the limit by the crisis and there may need to be some more fundamental changes notably around pensionable ages. But in general the mechanisms have been effective in sharing risk and re-balancing the pension schemes in a way that does not lead to scheme closures.

2.1.4 Coverage, minimum income provision for older people and indexation

Member States are using different types of provision and delivery mechanisms to ensure a minimum of adequacy in income streams for retired people:

- Minimum pensions within contributory earnings-related pension schemes for people with low income or short contribution records.

- Basic flat-rate pensions that may be non-contributory or contributory and include years of residency in their qualifying criteria.
- Separate social assistance-like, means tested benefits for older people with few or no other pension rights – often referred to as ‘Social Pensions’.

Many Member States have reformed their minimum pensions, basic pensions or minimum income provision in significant ways. Improvements to benefit levels and access, and changes to up-rating and indexing mechanisms or ad-hoc increases were particularly frequent.¹⁰

Valorisation and indexation of pensions

Valorisation (pre-retirement indexation) and indexation (of retirement benefits) are both closely linked. All countries revalue earnings from earlier years to the time of retirement when calculating benefits. This mechanism adjusts for changes in costs and standards of living between the time pension rights were earned and when they are claimed. Valorisation of past earnings impact on replacement rates and fiscal sustainability in major ways. This is a result of the compound-interest effect.

Many EU countries with earnings-related schemes valorise past earnings in line with economy-wide wage growth. However, several countries have moved away from earnings valorisation in recent years and they valorise earnings to price inflation or a mix of price inflation and earnings growth.

Changes in the indexation¹¹ of pensions during retirement have featured in many reform packages. Therefore replacement rates of the year of retirement explain only partially the adequacy of the pension system because they do not cover the decrease of the replacement rates during the pensioners' life in case of price indexation. Some countries have introduced 'sustainability factors' in the pension award linked to demographic developments (e.g. DE, SE), or use above-inflation rises in pension payments only if economic growth is rapid (e.g. HU, PT). The indexation issue can be viewed as a choice between a lower initial pension combined with earnings indexation and a higher starting benefit combined with price indexation. A majority of countries in the EU relies on indexation rules for pensions that do not fully reflect development in nominal wages (see Table 3).

¹⁰ More in the 2006 SPC study "Minimum income provision for older people and their contribution to adequacy in retirement"

http://ec.europa.eu/employment_social/spsi/docs/social_protection/SPC%20Study%20minimum%20income%20final.pdf

¹¹ Detailed presentation of indexation rules in EU Member States can be found in the Annex 2.

Table 3 - Indexation of income-related pensions in Member States

Variable	Member States
Wage growth	SI, DK and SE
Wage growth and change in pensioner-contributor-relation	DE
Prices and wages	BG, CZ, EE, CY, LU, HU, PL, FI, and SK, MT, RO
Prices	BE, ES, FR, IT LV, AT and UK
Prices and GDP growth (partially)	PT
Discretionary	EL, LT, IE and AT
Progressive	EL, IT, and PT

Source: 2009 Ageing Report, Joint Report on Social Protection and Social Inclusion 2009.

Note: Belgium: prices + partial adjustment to living standards.

Some countries have introduced progressive indexation of their pensions, where the increases granted to smaller pensions are larger. Also, ad hoc adjustments have been made to indexation rules. In some cases, this appears to operate in a procyclical way: pension increases are larger than the rules require when the public finances are healthy while increases are postponed or reduced in times of fiscal constraint.

2.1.5 Increasing complexity of pension systems and the pension package

Pension systems have become far more complex than they used to be as pensions have become based more on contributions from more pillars and new incentive structures have been introduced. Pension reforms have also meant a transfer of risk from pension scheme sponsors to the beneficiaries. More decisions by the individual beneficiary concerning time of retirement and investment choice is often now necessary to secure an adequate income in old age. This is because of increasing links between contributions and benefits, introduction of automatic adjustment mechanisms, and a transition to more individually funded pension provisions, require more decisions. This type of reforms has already been implemented in most EU Member States. Pension scheme members should be better furnished with reliable, intelligible information, but this should not be expected to transform them into experts. In this perspective, some countries provide detailed information, including estimations of pensions, to individuals. Best practice in the UK pensions industries is heading towards designing suitable default funds, recognising that most people in DC plans are 'accidental investors' who do not have the interest or inclination to actively manage their pension funds.

2.1.6 Supporting pension reforms by labour market measures¹²

¹² A more detailed analysis of developments in the labour markets between 2000 and 2008 is presented in the Annex 4.

Labour market measures intended to complement pension policies have included attempts to increase the effective exit age by way of increased pensionable age as well as efforts to curb early retirement and inactivity. Other measures have included legislation on labour contracts and employment protection.

The incentives to participate in the labour market and to search actively for a job are determined partly by benefit systems and changes to tax/benefit structures have played a large role in Member State efforts to increase employment.

The average seniority of an average person retiring in 2006 (non-contributory periods included) was lower than 30 years in DK, EL, MT, PT, and SI, and higher than 40 years in CZ, EE, and LU.¹³ These numbers show that the average working years are very often far below what is needed in many Member States to receive the maximum pension possible.

A key driver of pension expenditure is the average age at which people exit from the labour market and start drawing a pension. Labour market attachment among older persons varies widely across the EU. Even if the evolution of the labour force differs from one country to another, it is possible to identify some common stylised facts which can be summarised as follows:

- the participation rates of prime-age male workers (aged 25 to 54 years), at around 90%, remain the highest of all groups;
- in contrast, the participation rates of men aged 55 to 64 years have declined steadily in the past decades, but there are signs of reversal in many countries since the turn of the century;
- the participation rates of women have steadily increased over the past 25 years;
- the participation rates of young people (aged 15 to 24 years) have declined, mostly due to longer education;
- looking forward, the increasing share of older workers in the labour force could put downward pressure on the overall participation rate.

Given these trends, the main drivers of future changes in the overall participation rate, in addition to changes in the age composition of the population, are changes in the labour force attachment of prime-aged women, older workers (especially men) and, to a lesser extent, young people.

2.2 Reform outcomes assessed by indicators and measurements of adequacy

In line with the commonly agreed EU objectives on pensions the performance of pension systems should be assessed in relation to the interlinked, key dual social and financial objectives of adequacy and sustainability.

¹³ For more detailed information see the report "Updates of current and prospective theoretical pension replacement rates 2006-2046",
<http://ec.europa.eu/social/main.jsp?langId=en&catId=752&newsId=551&furtherNews=yes>

BOX: Indicators of adequacy and relative income of the elderly

Presently there are a number of indicators in use to measure of the relative income of the elderly:

ISG indicators

- **Theoretical replacement ratio:** This is an ISG indicator to measure the impact of new pension policies. The base case calculates the retirement pension received by a hypothetical person (male) working a full working life (40 contribution years) retiring at 65 accumulating pension rights under the new pension scheme and divides it by the projected wage in the immediate previous time period. This ratio is compared with the same theoretical ratio today for someone who would have accumulated pension rights under today's pension. It measures how reformed pension systems change future pension entitlements. It covers public pensions and mandatory private schemes, as well as private schemes that are considered to play a significant role in the future.
- **Aggregate replacement ratio:** is defined as median individual pensions of 65-74 year olds relative to median individual earnings of 50-59 year olds, excluding other social benefits. This is relevant to monitor current adequacy and the actual contribution of pensions to the replacement of earnings.
- **Median relative income of elderly people** reflects equivalised (the indicator takes into account household composition) household income and is relevant to measure the overall income situation of older people relative to the active population.

AWG indicators

- The '**Benefit ratio**' is the average benefit of: (i) public pension; and, (ii) public and private pensions, respectively, as a share of the economy-wide average wage (gross wages and salaries in relation to employees). Public pensions used to calculate the Benefit Ratio includes old-age, early pensions and Other pensions (disability and survivors),
- The '**Gross Average Replacement Rate**' is calculated as the average first retirement pension as a share of the economy-wide average wage, reported by Member States in the 2009 long-term projection exercise.¹⁴ Public pensions used to calculate the Gross Average Replacement Rate only includes old-age and early retirement pensions.

¹⁴ See European Commission and Economic Policy Committee (2009) "2009 Ageing Report: Economic and budgetary projections for the EU-27 Member States (2008-2060), European Economy, No 2.

2.2.1 Developments in current adequacy and relative income of the elderly

The indicators of current adequacy can measure how pension systems play their roles of poverty alleviation (at-risk-of-poverty of older people) and income smoothing (aggregate replacement ratio and relative median income of older people).

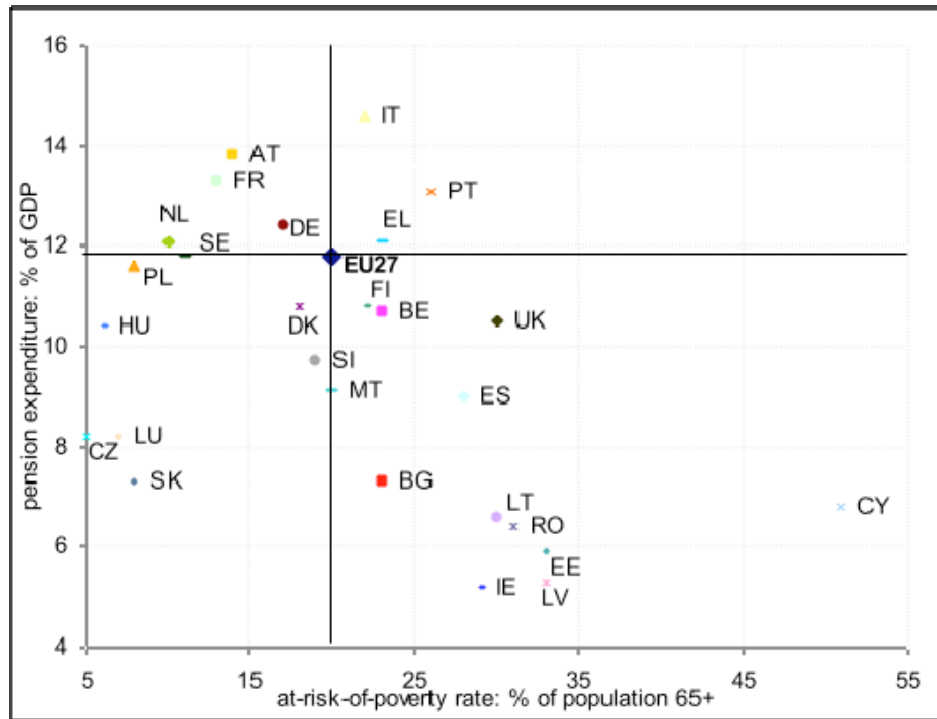
The at-risk-of-poverty for older people in the EU-27 (19% in 2008 for the population aged 65+) is slightly higher than for younger cohorts (16% in 2008 for the population aged 0-64). Looking in more detail at the levels of poverty risk for older people, substantial differences exist between Member States, also as far as effectiveness of pension expenditure is concerned (**Figure 4**). However, the poverty risk of older people may be somewhat overestimated, only monetary income (notably deriving from pensions) is taken into account to evaluate the relative position of older people. The wealth of pensioners, particularly house ownership (and associated imputed rents) and private savings, which have a strong effect on the income distribution of pensioners, are not taken into account, nor are other non-monetary benefits (free health care, transport, etc.).

A number of Member States manage to achieve relatively low at-risk-of-poverty rates of people aged 65 and more, together with restricted pension expenditure (see Figure 4). It might be a result of rather egalitarian character and strong redistributive features of pension systems currently in the pay-out phase, but also quite favourable current demographic situation.

Another group of Member States with relatively low pension expenditure and high at-risk-of-poverty rates have witnessed a considerable increase in pensioners' poverty in recent years. This might be due to ageing, relatively low pension entitlements, benefits indexed on prices or a mix of prices and wage indices, or fast economic growth, which during boom years benefited mainly people of active age.

In the EU-15 the elderly (65+) have a higher risk-of-poverty rate than both children and working age population (20% against respectively 18% and 15% between 2005 and 2008), while in 2005 in the EU-10 accession Member States pensioners experienced much lower risks of poverty than children and the working age population (8% against 25% and 17% respectively). This reflects partly the age orientation of social protection in these countries where pensions used to appear relatively generous compared to weak support to families with children. However, between 2005 and 2008 the relative situation of the elderly in the EU-10 has evolved rapidly, with the elderly at-risk-of-poverty rate increasing by 4 percentage points.

Figure 4 - At-risk-of-poverty rate of people aged 65+ and pension expenditure in EU Member States in 2007



Source: Eurostat EU-SILC, ESSPROS

Note: Expenditure covers both means-tested and non means- tested old age, partial, disability, early retirement, and survivors' pensions. At risk of poverty rate defined as with cut-off point of 60% of median equivalised income after social transfers.

In analysing effectiveness of pension expenditure in reducing poverty, one needs to take into account the fact that in some Member States elderly people are provided with free or subsidised social services.

A key factor affecting the poverty reducing effect of pensions is the coverage of different groups. In 2007 the at-risk-of-poverty rate in the EU-27 was at 16% for men and 22% for women aged 65 or more. In seven Member States the difference was higher than 10 pp. Only in MT and NL men aged 65 and more are more exposed to poverty than women.

Besides addressing poverty, pension systems play a role in allowing retirees to maintain living standards comparable to those achieved during their working lives. The aggregate replacement ratios are an indicator of income maintenance after retirement. Based on individual income from pensions, they generally show that current average pension levels are reaching around 49% of current earnings on average. This can be due to low coverage and/or low income replacement from statutory pension schemes, but can also reflect maturing pension systems and incomplete careers or under-declaration of earnings in the past.¹⁵

¹⁵ In this respect, it should be noted that the *aggregate replacement ratio* indicator is based on gross income figures, and that several factors besides aggregate replacement rates (such as differences in household composition and size and the overall design of social protection and taxation systems) can have a strong influence on the overall living standards of individuals.

On average in the EU-27, the aggregate replacement ratio is lower for women than for men (49% vs. 53% in 2007). This gender gap, however, is not as substantial as in the case of at-risk-of-poverty rates. In fourteen Member States the value of the ratio for women exceeds that for men.

The higher gender gap in at-risk-of-poverty rate than in the aggregate replacement ratio might be explained by several factors. First, in the majority of Member States pension benefits are indexed to prices or a combination of prices and wage indexation. In consequence, benefits for older pensioners can substantially lag behind wage developments, and women constitute the majority of older pensioners. Second, due to low female labour market participation in the past many elderly women have not built up personal pension entitlements, or they may not be entitled to survivors' pensions.

Median relative income of elderly people compares situation of people aged 65 and more to the situation of those aged 0-64, reflects equivalised (the indicator takes into account household composition) household income and is relevant to reflect the overall income situation of older people. In 2007 the value of the median relative income ranged between 54% in LV and 100% in HU.

2.2.2 Developments in future adequacy

Theoretical Replacement Rates 2008-2048

Theoretical Replacement Rates developed by the Indicators Subgroup of the Social Protection Committee are defined as a level of pension income in the first year after retirement as a percentage of individual earnings at the moment of pension take-up and are calculated for an assumed hypothetical worker (in the so-called "base-case" scenario).¹⁶ In order not to misinterpret the results it is thus vital to consider theoretical replacement rates with the associated information on representativeness and the assumptions used in the calculation. The choice of specific common assumptions about the hypothetical worker, such as the age of retirement and the length of the contributory period before retirement, inevitably imply that only a share of individuals are actually represented by this career scenario.

Given the assumptions described in the previous section for the calculations of theoretical replacement rates in the "base-case", fourteen Member States display results where reforms of statutory schemes would lead to a decrease of replacement rates between 2006 and 2046. This is for a worker with average earnings retiring at 65 after 40 years (see Figure 5, displaying the change in replacement rates from the current situation to the prospective situation). This is most probably a reflection of reforms that have lowered future benefit levels at a fixed retirement age in order to cope with increasing longevity and the expenditure it would otherwise entail. These reforms entailed extension of contribution periods and increases in pensionable ages (see chapter 2.1.1), or introduction

¹⁶ Assumptions used in calculation of TRR (e.g. "base-case": male worker, earnings of average wage constant over his fulltime 40 years career, retiring at 65, etc) as well as more detailed analysis are presented in the Annex 5.

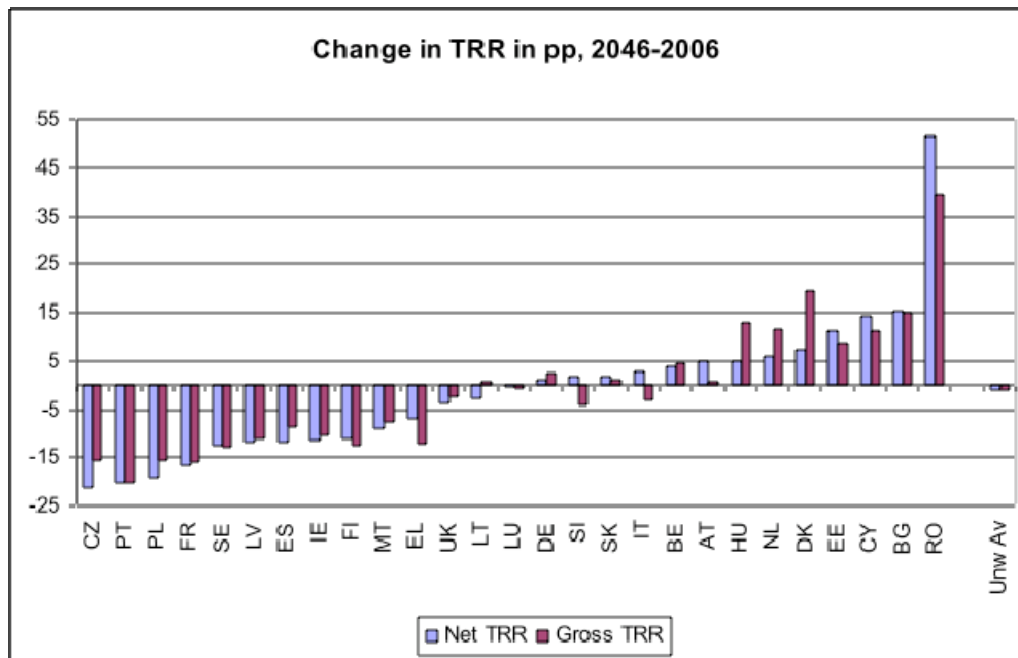
For more detailed information see the report "Updates of current and prospective theoretical pension replacement rates 2006-2046",

<http://ec.europa.eu/social/main.jsp?langId=en&catId=752&newsId=551&furtherNews=yes>

of automatic adjustment mechanisms (see chapter 2.1.3). For other group of Member States there seem to be no significant changes in their replacement rates between 2006 and 2046, and a last group of countries, where in major part TRR were relatively low in 2006, may actually observe their replacement rates rise as a result of recent reforms that would be fully in place by 2046.

Theoretical replacement rates are also calculated for variant cases, for instance for workers with different earnings and career profiles (see Annex 5). One should recall that coverage of private pensions included in the calculations are in some cases less than universal.

Figure 5 - Change in the Theoretical Replacement Rates between 2006 and 2046 (in p.p.)



Source: 2009 ISG report "Updates of current and prospective theoretical pension replacement rates 2006-2046".

Note: For countries with a projected drop in replacement rates it should be noted that the decrease can usually be counterbalanced by working longer.

For workers with low earnings, mandatory schemes tend to have a more significant role in replacement income. Gross replacement rates are thus usually higher than for average earners. This reflects the fact that most countries attempt to protect low income workers from old-age poverty especially in the statutory pension schemes.

Nevertheless, regarding the evolution of replacement rates between 2006 and 2046, the decline is in many cases of a comparable magnitude (as expressed in percentage points) for a low wage earner and an average one. Moreover, for some Member States where contribution-benefit links have been strengthened, the evolution of theoretical replacement rates appears to be very significantly less favourable for lower wages than for average wages.

On the other extreme, in almost all Member States those with a higher earnings profile display significantly lower replacement rates compared with average earners. Ceilings on

replacement rates, which often exist in statutory pension schemes, strengthen their redistributive character.

Studying the variant case of workers ten years after leaving employment shows how the value of benefits relative to prices and wages is maintained over time. According to the calculations replacement rates fall significantly in all but a few Member States. This clearly reflects the wide use of less than earnings indexation in Member States.

According to current legislation the retirement age in 2046 for women will still be different to that for men in some Member States. In all of these countries due to shorter female careers the gross and net replacement rate results are lower for women than for men, even without taking into account the implication of probable differences in average earnings that may exist between men and women.

Variants of shorter and longer careers are also considered by comparing a base case worker who retires at 65 with one that retires at 63 or at 67. The dynamics of bonus-malus work incentives show that in most Member States delaying retirement results in higher theoretical replacement rates, while earlier retirement usually results in lower replacement rates. In all but a few Member States the increments in pensions for prolonged working lives are higher than the fall in replacement rates with earlier retirement.

Studying to what extent pension entitlements are protected against the current loss of income due to career breaks such as care responsibilities or unemployment are also important as the number of contributory years needed for a full pension has been extended in many Member States.

In many Member States, absences from the labour market for childcare are often protected to a certain extent for the first years of absence. In a few countries extra pension entitlements following the birth of a child are provided, which means that even if no actual period of childcare leave is taken, the pension will still be greater than for women with no children. In another few Member States the drop in the replacement rate is negligible, but there are also a number of countries where child care years can result in a drop in replacement rates.

In most Member States unemployment breaks lead to drops in replacement rates, showing bigger drops the longer the break. In extreme cases longer unemployment periods can result in lowered replacement income as contributions are lost. The drops are generally more important in funded DC systems than in DB systems, where protection for unemployment periods is provided in the pension system.

Future developments in the benefit ratio

The 'benefit ratio' is the average benefit of public (or public and private) pension, as a share of the economy-wide average wage (gross wages and salaries in relation to employees) used by the Ageing Working Group of the Economic Policy Committee. In contrast to the TRR which project future situation of a hypothetical individual worker, benefit ratios are calculated on the basis of macro data, so reflect averages (for more details on the difference between indicators, see the *Box: Differences between measures of replacement rates and benefit ratios*).

Table 4 shows the benefit ratio and the replacement rate (the average first pension as a share of the economy-wide average wage) as in the AWG projections.¹⁷

Sizable decreases in benefit ratios are projected over coming decades. The decline in the public pension benefit ratio over the period 2008 to 2060 is substantial, 20% or more in eleven Member States. However, the decline in the total pension benefit ratio is smaller in several countries when the projected support from supplementary pension schemes, is considered, see also Table 4.¹⁸

In the case of a declining benefit ratio over time, the replacement rates at retirement provides information on whether the reduction in average pension benefit over time is due to a decline over time in newly awarded pensions (as reflected in the replacement rate at retirement), or due to a decline in previously awarded 'old' pensions relative to wages, the latter being influenced by the pension indexation rule employed. Volumes of new entrants and drop-outs can also have an influence. The theoretical replacement rates and the benefit ratio are not directly comparable (see the Box: **Differences between replacement rates and benefit ratios**).

¹⁷ The average wage (the denominator of the benefit ratio) is calculated as a ratio of gross wages and employed persons (both employees and self-employed) of age 15 to 71 years.

¹⁸ It should be noted that not all Member States were in a position to provide projection for supplementary schemes even if they exist, indicating that the total benefit ratio is not fully comparable.

Table 4 - Benefit ratios and replacement rates (in %)

	Benefit Ratio (%)						Gross Average Replacement Rate (%)					
	Public pensions			Public and private pensions			Public pensions			Public and private pensions		
	2007	2060	% change	2007	2060	% change	2007	2060	% change	2007	2060	% change
BE	45	43	-4				45	42	-7			
BG	44	36	-20	44	41	-8		36			49	
CZ	45	38	-17				33	27	-17	33	27	-17
DK	39	38	-4	64	75	17	33	33	0	71	84	18
DE	51	42	-17									
EE	26	16	-40	26	22	-18	28	16	-41	28	31	9
IE	27	32	16									
EL	73	80	10				61	67	10			
ES	58	52	-10	62	57	-8						
FR	63	48	-25									
IT	68	47	-31				67	49	-26			
CY	54	57	5									
LV	24	13	-47	24	25	4	33	22	-33	33	33	2
LT	33	28	-16	33	32	-2	32	29	-10	32	37	15
LU	46	44	-4	46	44	-4	53	62	17			
HU	39	36	-8	39	38	-3	49	38	-23	49	43	-13
MT	42	40	-6									
NL	44	41	-7	74	81	10						
AT	55	39	-30				49	38	-22			
PL	56	26	-54	56	31	-44						
PT	46	33	-29	47	33	-31	58	56	-3			
RO	29	37	26	29	41	41	36	44	20	36	49	34
SI	41	39	-6	41	40	-2						
SK	45	33	-27	45	40	-11						
FI	49	47	-5									
SE	49	30	-39	64	46	-27	49	31	-36			
UK	35	37	7									
NO	51	47	-8									

Source: Commission services, EPC.

Note: The 'Benefit ratio' is the average benefit of public pension and public and private pensions, respectively, as a share of the economy-wide average wage (gross wages and salaries in relation to employees), as calculated by the Commission. The 'Gross Average Replacement Rate' is calculated as the average first pension as a share of the economy-wide average wage, as reported by the Member States in the pension questionnaire. Public pensions used to calculate the Benefit Ratio includes old-age and early pensions and other pensions, while public pensions used to calculate the Gross Average Replacement Rate only includes old-age and early pensions. Private pensions are not included for all Member States. Hence, the comparability of the figures is limited. In general, the old-age and early pensions are the major part of pension expenditure, so this difference is unlikely to affect the results substantially. The benefit ratio and the gross average replacement rate convey different information. In particular, due to differences in wage concepts used when calculating the benefit ratio and the replacement rate, the two indicators (and in specially their level) are not strictly comparable and should be interpreted with caution. The value of indicators might change as some Member States consider reforms of their pension systems (e.g. Ireland).

Only about half of the Member States have reported replacement rates, which hampers a mapping of the situation across the EU. Nonetheless, substantial declines in the public pension replacement rate between 2007 and 2060 suggest that the valorisation of the average first pension is lagging behind the average wage growth quite significantly (also as a result of automatic adjustments, e.g. "sustainability factors" – see Chapter 2.1.3).

However, it must be borne in mind that other sources of income for older people can make up for the lower initial pension from public schemes (income from supplementary schemes, drawing down on accumulated assets and savings).

Box: Differences between measures of replacement rates and benefit ratios

There are a number of factors that explain the difference in the magnitude of the change over time of the pension benefit in relation to earnings:

- *The concepts of the indicators are different:* The benefit ratio is defined as the average pension in relation to the average wage at time t. The theoretical replacement rate is defined as the first retirement pension at time t in relation to the last wage at time t-1 for a representative, hypothetical person (male worker) with a typical career (40 years). There are several underlying differences in the methodologies to compute these two measures of adequacy. First, the benefit ratio measures the average pension comprising all pensions, both new and old, thus covering several cohorts. As such, it captures the evolution of pension after retirement, which depends on how the pension benefit is updated (the indexation regime). Second, the benefit ratio includes all pension benefits and all features that affect the value of pension contributions (e.g. crediting for maternity leave, higher education...). Third, the benefit ratio measures real careers, as opposed to a hypothetical one, and their changes over time. These factors contribute to the larger decline in the benefit ratio than in the theoretical replacement rate in the long term.
- *The projection period is different:* The projection period for the benefit ratio is 2007-2060, while for the theoretical replacement rate it is 2006-2046. Aligning the period over which developments are measured reduces the difference between the indicators.
- *The coverage of the pension benefits is different:* The benefit ratio includes all public pensions (e.g. old-age, early and disability pension) and, where available, private pensions. The theoretical replacement rate includes old-age and early public pensions as well as mandatory private pillars and some other private pensions when these schemes are projected to play a significant role. Aligning the coverage of the indicators reduces the difference between the indicators. The projections in the 2009 Ageing Report show that 'other pensions' (disability...) are virtually constant as a share of GDP over the projection period.
- *Gender differences* are reflected in benefit ratios and not in theoretical replacement rates: as a result benefit ratios are lower.

In sum, the differences between the two indicators, and in particular, the larger reduction in the long-term in the benefit ratio compared to the theoretical replacement rates at aggregate level for the EU27, can be attributed to:

- The general trend in EU Member States increasing reliance on price indexation of pension after retirement. This usually leads to 'old' pensions – though remaining constant in real terms - rising slower than wages. In turn, when theoretical replacement rates are calculated ten years after retirement they also show a significant fall compared to the year of retirement, thus reflecting indexation by prices only (or by less than earnings) and thus getting closer to the calculations for the benefit ratio. Moreover, the benefit ratio relies on 'real' careers and contributory periods and not hypothetical ones.
- The theoretical replacement rate projections end up in 2046. On the other hand the projections in the 2009 Ageing Report reveal that the decline in the benefit ratio continues up to 2060 (decreasing by 6.5 p.p. by 2046 and by 8.5 p.p. by 2060).

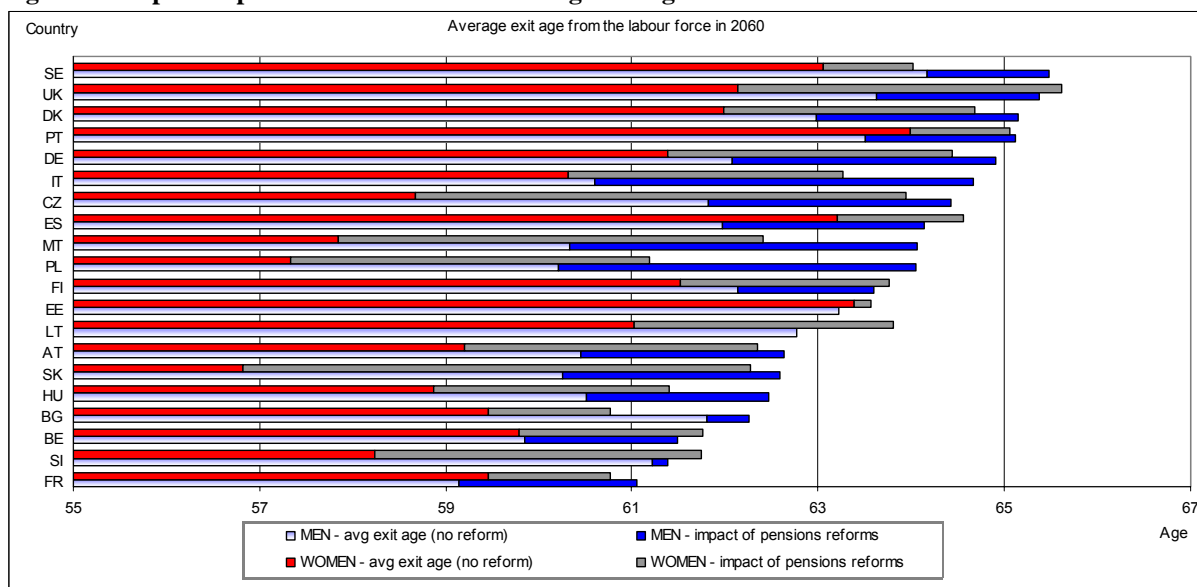
2.3 Reform outcomes assessed by measurements of sustainability

2.3.1 The impact of pension reforms on labour market participation

Pension reforms can have a substantial impact on labour market performance, depending on the specific design of the reform. A particularly interesting feature is to analyse the extent to which pension reforms alters the average retirement age.¹⁹

The analysis in the 2009 Ageing Report takes into account the potential effect of recent pension reforms on the participation rates of older workers.²⁰ The expected postponement of retirement is summarised by the difference in the average exit age from the labour force in 2060 (see Figure 6).

Figure 6 - Impact of pension reforms on the average exit age from the labour force



Source: Commission services, EPC

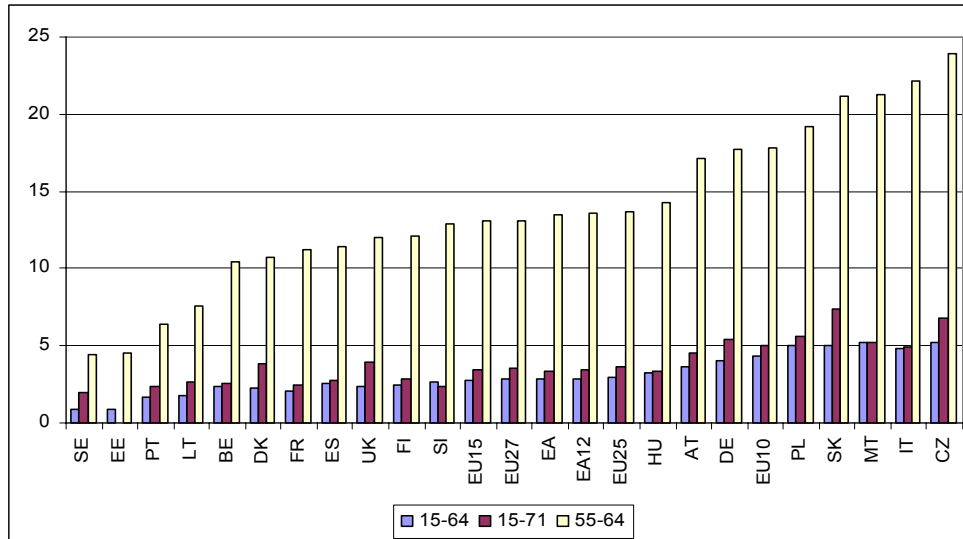
Figure 7 shows the estimated impact of pension reforms on participation rates. According to the projection, pension reforms would have a sizeable impact on the labour market participation of older workers in most of the Member States which plan the implementation of enacted pension reforms. A stronger impact is expected from changes in the parameters affecting the statutory age of retirement. Overall, in the EU, the participation rate of older people (55-64) is estimated to be about 8 p.p. higher in 2020

¹⁹ For a detailed account of pension reforms which impact has been incorporated in the projections, and for recent pension reforms enacted after July 2008, see Annex 6.

²⁰ The findings of an international research project based on micro-estimation results are clear: changing pension plan provisions would have large effects on the labour participation of older workers, see Gruber and Wise (2005). The reforms taken into account are recently enacted in 20 EU Member States and include measures to be phased in gradually. Some countries have enacted legislation to increase the statutory retirement age for women or for both men and women. Others have changed provisions of social security programmes (and sometimes of other transfer programmes used as alternative early retirement paths) that provided strong incentives to leave the labour force at an early age. The information was provided by the Members of the EPC and AWG. For details on the pension reforms incorporated in the baseline scenario, see European Commission–EPC (2008).

and 13 p.p. higher in 2060 due to the impact of pension reforms. In the euro area, the impact is estimated to be slightly larger, at about 9 p.p. in 2020 and 13.5 p.p. 2060, respectively.

Figure 7 - Estimated impact of pension reform on participation rates (2060), in percentage points (comparison of projections with and without incorporating recent pension reforms)



Source: Commission services, EPC

In the EU as a whole, the average exit age from the labour market was 62.2 for males and 61.3 for females in 2008.²¹ By 2060, this is projected to have risen to 63.8 and 63.3 respectively, in part due to the reforms enacted (see Table 5). This implies an increase in the share of adult life spent in retirement, from 23% to 26% for males, and from 27% to 30% for females. In order to keep the share of adult life spent in retirement constant at its 2008 level, the average exit age would need to rise by an additional two to three years. A priori, there is no economic rationale for favouring a constant share of adult life spent in retirement, and indeed a preference for a longer period of leisure time in retirement could be justified on the basis of rising living standards. However, retirement decisions need be economically and financially viable.

Table 5 - Ageing problem or retirement problem?

EU27				
	Men		Women	
	2008	2060	2008	2060
Employment rate of older workers	54.5	64.2	36.6	55.7
Average exit age	62.2	63.8	61.3	63.3
Life expectancy at the time of withdrawal	18.5	22.9	23.1	26.7
% of life spent in retirement	23%	26%	27%	30%
Requested exit postponement, in years (to keep % life spent in retirement constant)		3.0		2.1

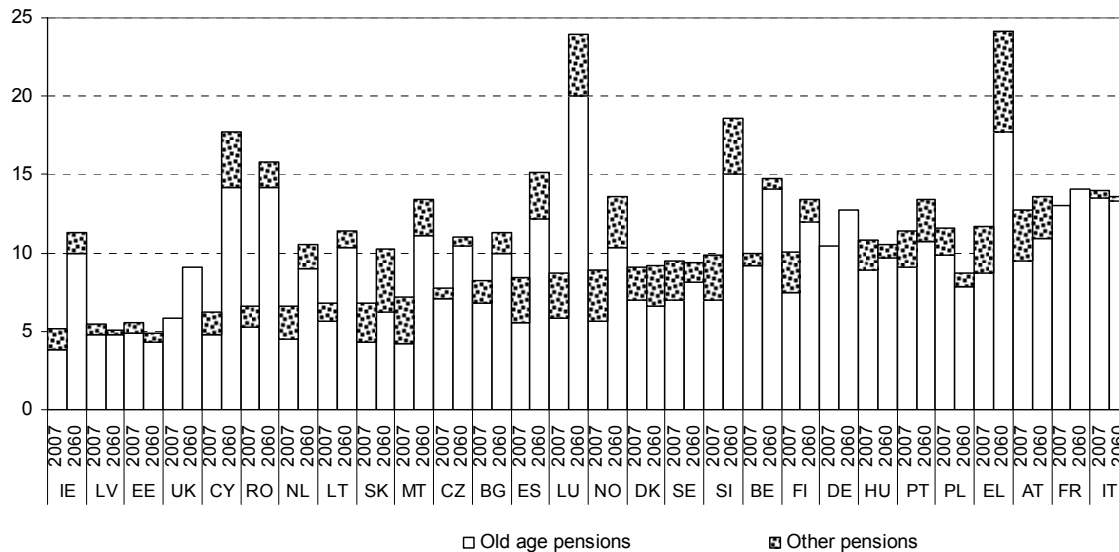
²¹ The average exit age in Table 5 is calculated with the cohort simulation model used in the 2009 Ageing Report and does not exactly match the exit age in Table 1 (Eurostat structural indicator).

2.3.2 Pension expenditure projections

Effect of reforms on public pension expenditure²²

For the EU, the projections show an increase in the public pension expenditures of 2.4 p.p. of GDP over the period 2007-2060 (2.8 p.p. of GDP for the euro area). The lion's share of the projected increase in public pension expenditure is due to the increase in old-age and early pensions (projected to increase by 2.4 p.p. of EU GDP between 2007 and 2060). A smaller increase is projected for other expenditure, mainly disability and survivor pensions, increasing only slightly by 0.1 p.p. of GDP in the euro area.

Figure 8 - Gross old-age and other public pension expenditure in 2007 and 2060 (% of GDP)



Source: Commission services, EPC.

Note: The definitions of Old-age and Other pensions are provided in the 2009 Ageing Report.

Definitions used in the projections:

France: Disability pensions for individuals below a retirement age are included in health-care expenditure. After the minimum retirement age (60) disability pensions are covered by the public pension scheme. Survivors' pensions for all age are covered by the public pension expenditures.

UK: Benefits paid to disabled persons below state pension age are not included in the projection, but disability benefits for persons above state pension age are included in public pension expenditure. The UK does not have survivor pensions.

Ireland: "Old-age and other public pension expenditure" includes in addition the pension expenditure of public service occupational pension schemes.

Hungary: The Economic Policy Committee endorsed the projection of public pension expenditure in Hungary incorporating the 2009 pension reform at their 22 February 2010 meeting. According to the revised pension projections, public pension expenditure is projected to decrease from 10.9% of GDP in 2007 to 10.5% of GDP in 2060, i.e. by 0.4 p.p. of GDP, compared with the projection in the 2009 Ageing Report, where an increase of 3 p.p. of GDP between 2007 and 2060 was projected. The projection of old-age and early pensions include an estimation of old-age allowance (social allowance for people who have not acquired pension rights).

In three Member States (EL, CY, and LU) public pension expenditure is projected to increase by more than 10 p.p. of GDP. In another five Member States (IE, ES, MT, RO, SI) spending is projected to grow between 5 to 10 p.p. In case of DK, EE, IT, LV, PL, HU and SE the ratio either stays at or drops down below the initial (2007) level. For the majority of the Member States the change of the ratio is below 5 p.p.. Spending on

²² An analysis of current pension expenditure is presented in the Annex 7.

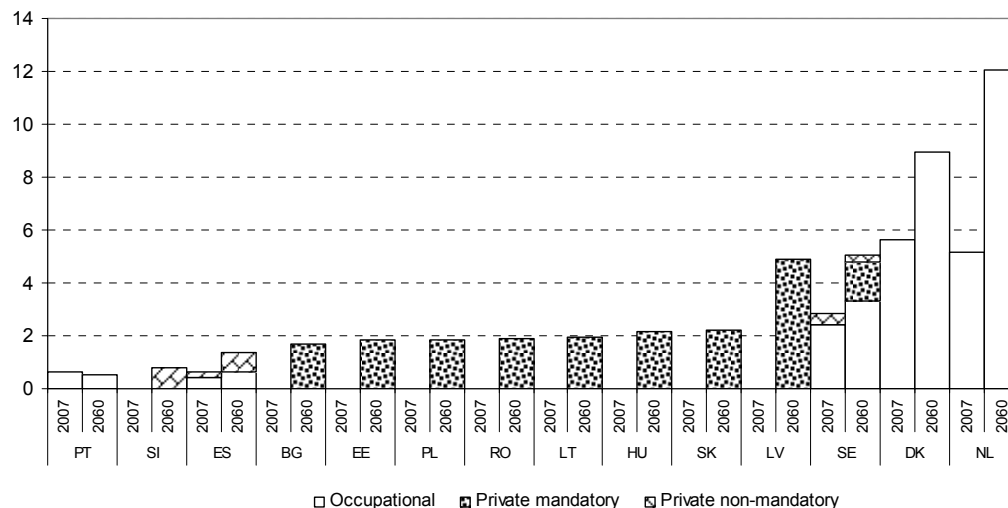
disability and survivor pensions are projected to decrease in the majority of countries. Only in seven Member States (PT, RO, SI, SK, FI, SE, and UK) is it projected to increase, although only slightly.

Effect of reforms on private pensions

As presented in Chapter 2.1.4, the role of privately managed pension schemes is currently rather limited and the major part of pension income is provided by public pension schemes. But, as shown in Figure 9, the provision of pension income by private pension funds is expected to increase in the future.²³

In general, net contributions to occupational and private pension funds are increasing over time and the most of occupational and private funds are still “a long way” from being mature funds. In other words, at this moment there are only a few countries with large numbers of pensioners or people who will retire soon and will rely to a substantial part on funded pensions. Thus, in most cases, contributions to the private funds continue to exceed drawings from now-retired members, meaning there should be no need for the funds to liquidate under current difficult conditions any of their investments and sell assets at reduced prices. Figure 10 shows the value of accumulated assets in both occupational and private pension schemes in 2007 and 2060 as projected by some of the Member States.

Figure 9 - Expenditure of non-public occupational, private mandatory and non-mandatory pension (% of GDP)

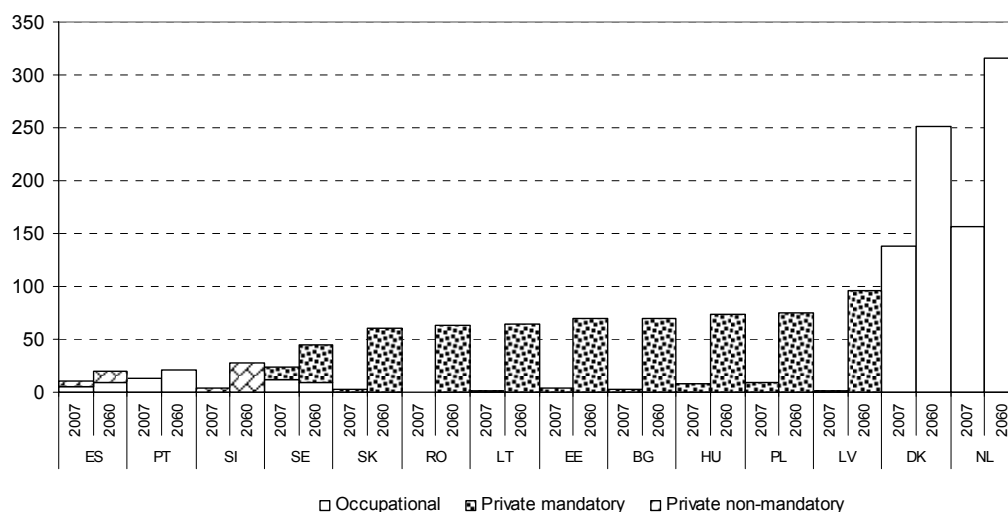


Source: Commission services, EPC.

Note: The graph presents only the countries which provided data for other pension schemes and its value is non zero. The graph is thus not comprehensive; private pensions may exist in a country, but it was not possible to provide a projection. In Slovakia, the private pension pillar changed from mandatory to voluntary in 2008.

²³ Due to a lack of information concerning development of occupational and private schemes, only a few countries provided a projection of relevant variables.

Figure 10 - Occupational, private mandatory and non-mandatory pension assets (% of GDP)



Source: Commission services, EPC.

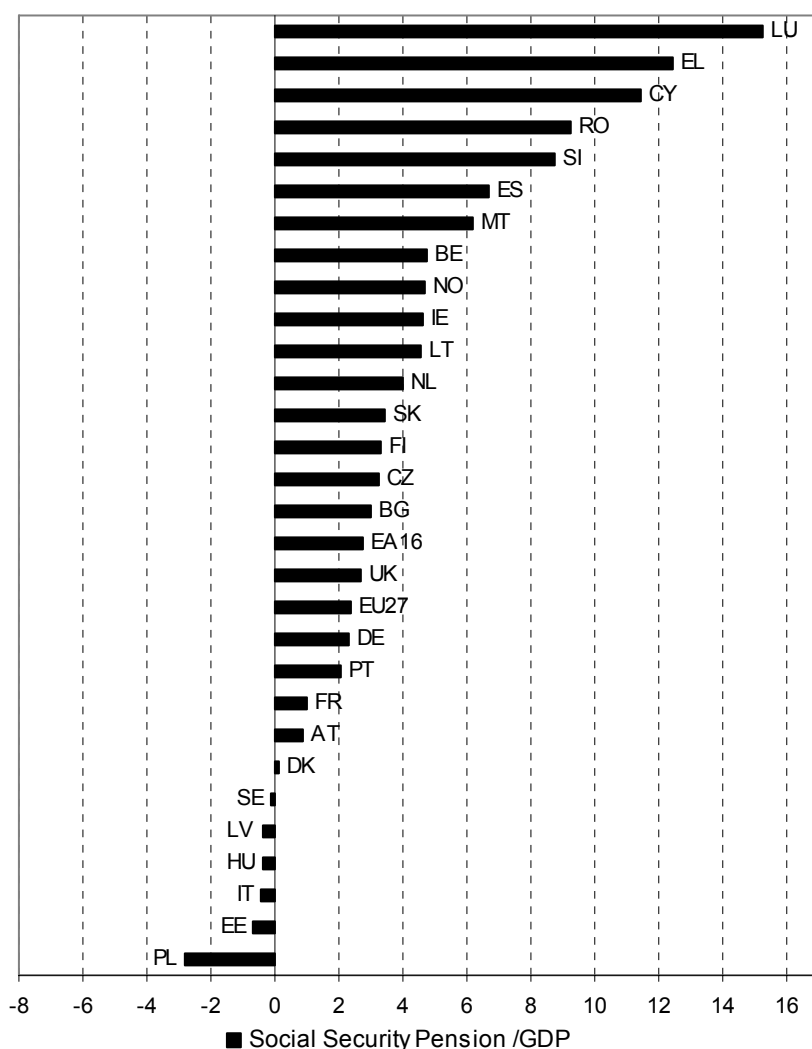
Note: The graph presents only the countries that provided data for other pension schemes.

Drivers of pension expenditure

Figure 11 shows the pension to GDP increases in Member States over the whole projection horizon (2007 – 2060). In some cases the ratio of future expenditure can be pushed downwards due to a shift from public schemes towards private mandatory schemes.²⁴

²⁴ In the case of Luxembourg, the pension projection is affected by the considerable number of cross border workers who will in the future years receive a pension from the Luxembourg social security scheme, but at the same time will not be registered as Luxembourg inhabitants. Due to this peculiar circumstance, Luxembourg can not be, in some cases, strictly compared with other Member States. Thus, in some of our analysis Luxembourg is treated as an outlier. Whenever the conclusions seem to be affected by country specific situation, this is highlighted in the text.

Figure 11 - Change in the Public Pension/GDP over 2007-60 (in percentage points)



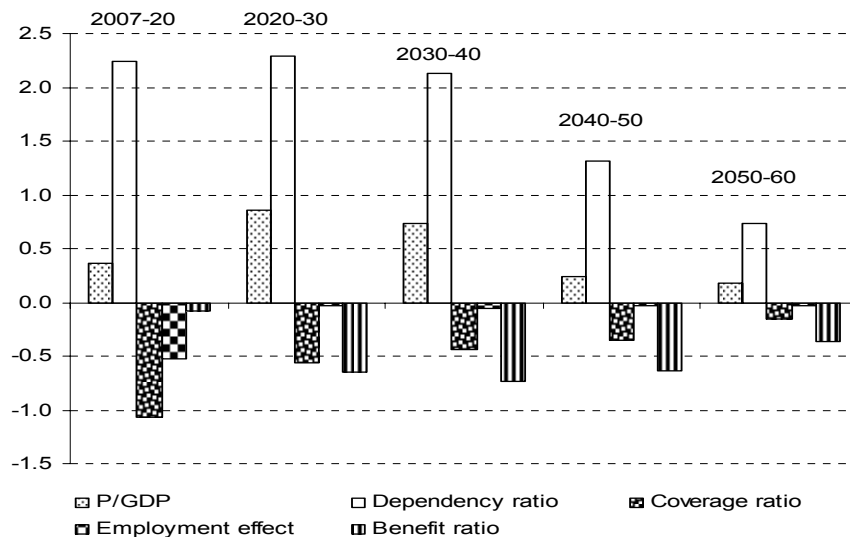
Source: Commission services, EPC. Hungary reformed its pension system in 2009. Following the reform, its impact was assessed through a peer review by the AWG, and endorsed by the EPC at their 22 February 2010 meeting. According to the revised pension projections, public pension expenditure is projected to decrease from 10.9% of GDP in 2007 to 10.5% of GDP in 2060, i.e. by 0.4 p.p. of GDP, compared with the projection in the 2009 Ageing Report, where an increase of 3 p.p. of GDP between 2007 and 2060 was projected.

In order to shed light on the main drivers behind these dynamics, the decomposition of pension expenditure to GDP into its main components is outlined in the Annex 8.

In general, at the EU27 level, the effect of demographic factor – as captured by the dependency ratio (the ratio between persons aged 65 and over and persons aged 15-64) – is the most relevant in pushing up spending, although it is decreasing over time as from 2030 (Figure 12). The largest contribution is envisaged for the periods 2007-2030, reaching +2.3 p.p. At the end of the projection (2050-2060), the contribution of demographic factors levels down to +0.7 p.p. of GDP. Significant differences can be found among Member States. Especially, idiosyncratic demographic developments are expected for EU10 and EU15 countries.

The contribution of the coverage ratio (the ratio between the number of pensioners and persons aged 65 and over) at EU27 level is expected to fade away over the projection horizon. The initial downward contribution (-1.1 p.p.) of the 2007-2020 period is estimated to subsequently fall down over the projection period towards zero (-0.2 p.p.). The contribution of the employment effect is noticeable during the period 2007-20, contributing to limit the increase by -0.5 p.p., and its contribution subsequently vanishes in the period 2020-30. Finally, the contribution of the benefit ratio development at the EU27 level to containing spending is envisaged to increase in absolute terms from the initial level (-0.1 p.p.) in 2007-2020 to its maximum value in 2030-2040 (-0.7 p.p.).

Figure 12 - Decomposition of the public pension spending to GDP ratio over sub periods for EU27 (in percentage points)



Source: Commission services, EPC.

The 2009 Ageing Report presents the third round of expenditure projections in the EU Member States (after the 2001 and 2006 rounds). The 2009 revisions of projected changes in pension expenditure over the long term are due to several factors, notably but not exclusively due to reforms of pension systems. The effects of pension reforms enacted between 2001 and 2005 are noticeable in several countries (DE, EL, FR, IT, NL, AT, SI and FI). Except for Slovenia where the indexation of pension after retirement was made more generous for pensioners in 2005, reforms resulted in a smaller increase in pension expenditure. Between 2005 and 2008, reforms in CZ, DK, and HU led to a lower projected increase in the 2009 projections.²⁵

2.3.3 Fiscal sustainability challenges arising from the impact of ageing populations

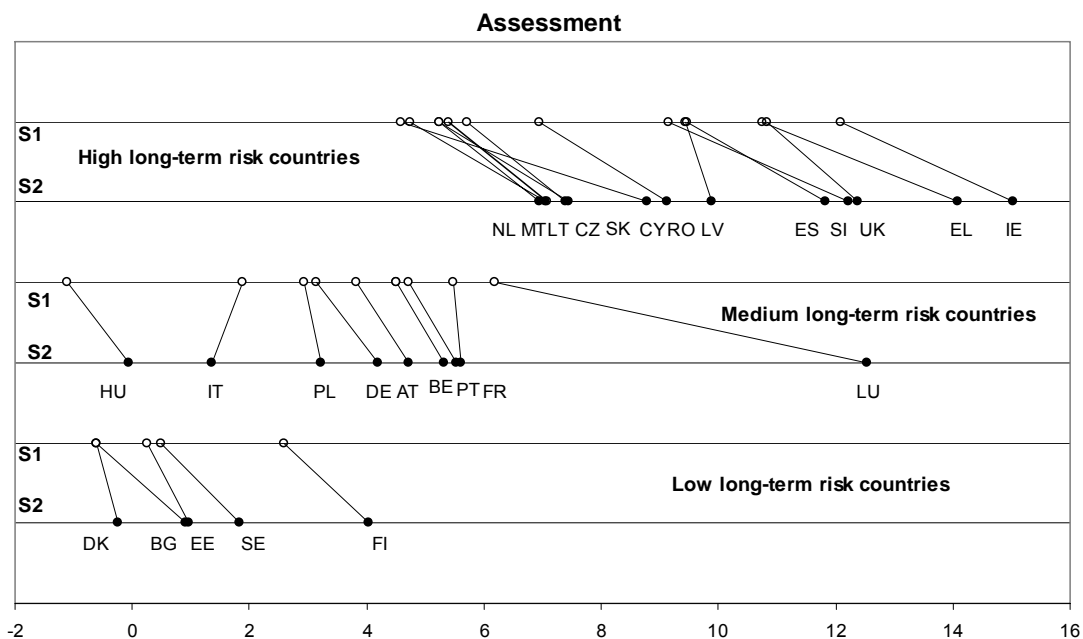
The assessment of public finance sustainability in this section is not restricted to pensions. It looks at the challenge of ageing to the entire general government sector, so for example health care expenditure is included. The total cost of ageing and its components are presented in Annex 15.

²⁵ Comparison of results of the 2001, 2006 and 2009 rounds of projections can be found in the Annex 9.

The sustainability indicators provide a basis to classify the long-term risks to the sustainability of the public finances in EU Member States. They show the size of permanent budgetary adjustment required to ensure that the public budget constraint is met, taking account of the cost of ageing.²⁶ The S1 indicator shows the adjustment to the current structural primary balance required to reach a target government gross debt of 60% of GDP in 2060. The S2 indicator shows the adjustment to the current structural primary balance required to fulfil the infinite horizon intertemporal budget constraint. Thus, the difference between S1 and S2 is the length of the time horizon taken, and S1 is an indication of the urgency of necessary reforms.

To make an overall assessment on the sustainability of public finances, other additional relevant risk factors are taken into account for a qualitative assessment: high initial level of public debt (as indebted countries are more sensitive to economic shocks and interest rate changes), deterioration in primary budget balance (as it results in rising debt burden), high current tax ratio (as it limits room of manoeuvre for using tax increases), and a projected drop in the pension benefit ratio (as it increases the risk of political pressure for increasing pension benefits).

Figure 13 - Overall risk classification and the sustainability gaps (S2 and S1 in the baseline scenario)



Source: Commission services

Hungary reformed its pension system in 2009. According to the revised pension projections, public pension expenditure is projected to decrease from 10.9% of GDP in 2007 to 10.5% of GDP in 2060, i.e. by 0.4 p.p. of GDP. The revised projection is not included in this graph (see note to Figure 8).

It should be noted that countries can have similar degree of risks to fiscal sustainability but they are result of different factors. In some cases these are significant increases in age-related expenditure, in others weak current budgetary positions, or high levels of public debt. More detailed analysis by country is presented in the Annex 10.

²⁶ For detailed definitions of the indicators see the 2009 Sustainability Report.

The results of the 2009 Sustainability Report differ significantly from those presented in the 2006 report. While in 2006 the EU-25 average sustainability gap (S2) was estimated at 3.4% of GDP, the current estimates are for 6.5% of GDP. Overall, worsening in the current budgetary position has increased the value of S2 by 3.2 p.p. of GDP, as no consolidation plans are included in the starting point (current budgetary position) but there has been a slight improvement of 0.1 p.p. of GDP in the long-term cost of ageing component. Considering national MTOs that reflect fiscal consolidation plans brings the S2 indicator closer to 2006 levels (more detailed analysis of long-term sustainability before (in 2006) and during the crisis (in 2009) is presented in Annex 10).

3 The impact of the crisis

3.1 The crisis: from the financial sector to the real economy

The financial crisis that has hit the global economy since the summer of 2007 is without precedent in post-war economic history. Although its size and extent are exceptional, the crisis has many features in common with similar financial-stress driven recession episodes in the past. The crisis was preceded by long period of rapid credit growth, low risk premiums, abundant availability of liquidity, strong leveraging, soaring asset prices and the development of bubbles in the real estate sector. Over-stretched leveraging positions rendered financial institutions extremely vulnerable to corrections in asset markets. As a result a turn-around in a relatively small corner of the financial system (the US subprime market) was sufficient to topple the whole structure. Such episodes have happened before (e.g. Japan and the Nordic countries in the early 1990s, the Asian crisis in the late-1990s). However, this time is different, with the crisis being global akin to the events that triggered the Great Depression of the 1930s.

The transmission of financial distress to the real economy evolved at record speed, with credit restraint and sagging confidence hitting business investment and household demand, notably for consumer durables and housing. The cross-border transmission was also extremely rapid, due to the tight connections within the financial system itself and also the strongly integrated supply chains in global product markets. EU real GDP is projected to have shrunk by some 4% in 2009, the sharpest contraction in its history. And although signs of an incipient recovery abound, this is expected to be rather sluggish as demand will remain depressed due to deleveraging across the economy as well as painful adjustments in the industrial structure. Unless policies change considerably, potential output growth will suffer, as parts of the capital stock are obsolete and increased risk aversion will weigh on capital formation and R&D.

The ongoing recession is thus likely to leave deep and long-lasting traces on economic performance and entail social hardship of many kinds. Job losses can be contained for some time by flexible unemployment benefit arrangements, but eventually the impact of rapidly rising unemployment will be felt, with downturns in housing markets occurring simultaneously affecting (notably highly-indebted) households. The fiscal positions of governments will continue to deteriorate, not only for cyclical reasons, but also in a structural manner as tax bases shrink on a permanent basis and contingent liabilities of governments stemming from bank rescues may materialise. An open question is whether the crisis will weaken the incentives for structural reform and thereby adversely affect potential growth further, or whether it will provide an opportunity to undertake far-reaching policy actions.

3.2 Economic prospects in the short-term

3.2.1 EU economy on the road to a gradual recovery

The Commission's spring 2010 confirms that the economic recovery is underway in the EU. A gradual recovery is expected with GDP forecast to grow by 1% in 2010 and 1 ¾% in 2011. The near-term rebound in activity follows from improvements in the external

environment as well as from the significant fiscal and monetary policy measures put in place. Further out, weak domestic demand is set to restrain the strength of the recovery, with large differences with regard to its speed among the Member States. In particular, labour-market conditions have shown some signs of stabilisation recently, with the unemployment rate projected to peak in 2010 at close to 10% in the EU. The public deficit is also expected to rise, to 7¼% of GDP in 2010, before falling back slightly in 2011 as the economy picks up and temporary measures gradually come to an end (see Annex 12 for developments per Member State).

Having experienced the deepest, longest and most broad-based recession in its history, the EU economy came out of the recession in the third quarter of 2009, largely due to the measures put in place under the European Economic Recovery Plan.. Beyond the initial rebound, the recovery is proving more gradual than in past upturns. This is not surprising given the extraordinary nature of the recent downturn. Cyclical rebounds following financial crises tend to be more muted than in other circumstances. Like other developed countries, the EU will grapple with the legacy of the crisis for some time to come.

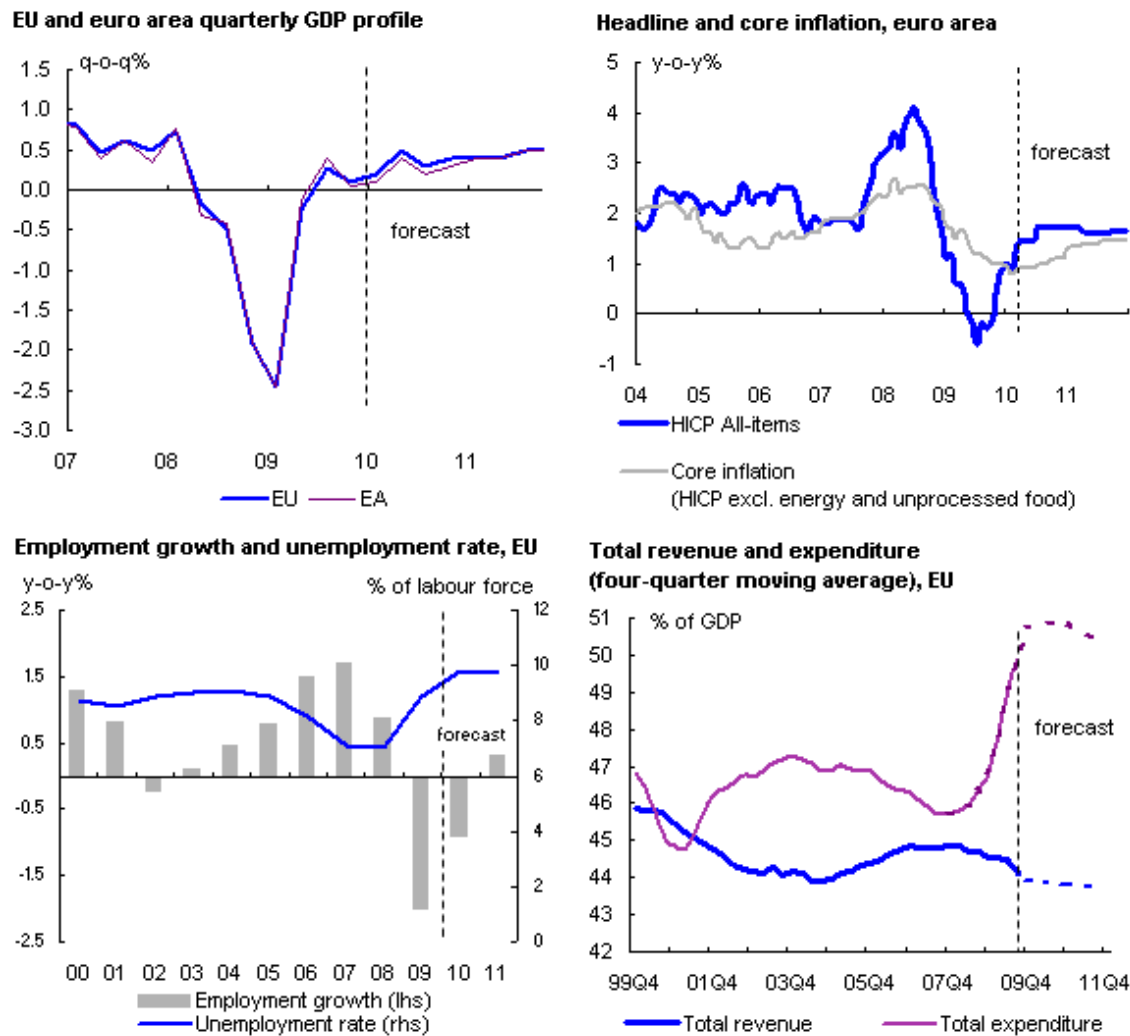
3.2.2 A gradual post-crisis recovery ahead

The improved near-term outlook in the EU and abroad is partly the result of temporary factors. As the impact of these fade in the course of 2010, economic activity in the EU is expected to regain ground more firmly by the end of 2010. Domestic demand faces a number of constraints going forward. Reflecting low capacity utilisation, relatively weak demand prospects deleveraging and heightened risk aversion hold back investment. Although private consumption proved to be a stabilising factor during the recession, spending in the period ahead is set to be held back by weak labour-market prospects and wage growth and in a number of countries by the housing market correction.

3.2.3 Muted labour market prospects

The EU labour market has been more resilient to the recession than expected, largely on account of short-term policy measures, past reforms and labour hoarding in some Member States. Signs of stabilisation have recently begun to emerge and the outlook is now somewhat improved compared to the autumn forecast. Nevertheless, an increase in labour shedding is expected through this year. Employment contracted by around 2¼% in 2009, and a further decline of about 1% expected in 2010, and it is expected to increase during only in 2011 as the recovery takes hold. The unemployment rate is projected to stabilise at close to 10% in the EU, though the situation differs markedly across Member States.

Figure 14 - Commission spring 2000 forecast, main variables



Source: Commission services

In terms of recent employment developments, there are considerable differences between age groups and between men and women. Workers with "weaker" work contracts, less qualified and less experienced workers have borne much of the brunt of the current recession. Men tend to be overrepresented in these categories. Conversely, women have so far been less affected than men, because the crisis hit first and foremost sectors such as construction and manufacturing, where male employment is relatively high. Yet, even the female employment rate was falling during 2009 – for the first time during the decade.

The unemployment rate for young people (15-24) has increased significantly. Employment for this group fell by 1.8 million persons (8%) between the fourth quarter of 2008 and the fourth quarter of 2009. The fall in employment of prime age workers has been fast between 2008Q4 and 2009Q1 and then slowed down during 2009. Still, between 2008Q4 and 2009Q4 3.3 million jobs (1.9%) in the prime age group have been lost. As regards older workers (55-64), employment rates which grew until the beginning of 2009 have been basically constant during the year 2009. As compared to employment of young people, good performance of older workers employment is even stronger than in

the previous crises of the beginning of 1990's and 2000's. The EU aggregate however mask rather heterogeneous developments across Member States. Although, the labour market adjustment has so far been sizeable in Spain, Ireland, and the Baltic States, it has as yet been relatively limited in Italy and Germany.

Table 6 - Employment and participation rates by age groups and gender, EU

European Union (EU 27)						
	Avg 2000-2007	2008	2009Q1	2009Q2	2009Q3	2009Q4
Employment rate (ages 15-64)						
total	63.2	65.9	65.1	64.7	64.4	64.4
<i>young (15-24)</i>	36.6	37.6	36.0	35.4	34.7	34.5
<i>prime-age (25-54)</i>	77.0	79.6	78.6	78.2	78.0	77.8
<i>older (55-64)</i>	40.4	45.6	46.0	46.1	45.8	46.1
male	70.9	72.8	71.4	70.8	70.5	70.2
female	55.6	59.1	58.8	58.7	58.5	58.5
Participation rate (ages 15-64)						
total	69.3	70.9	71.1	71.1	71.0	71.0
<i>young (15-24)</i>	44.5	44.5	44.2	44.1	43.7	43.3
<i>prime-age (25-54)</i>	83.4	84.8	84.9	84.8	84.9	85.0
<i>older (55-64)</i>	43.2	48.1	49.0	49.2	49.1	49.3
male	77.2	78.0	78.0	77.8	77.7	77.6
female	61.5	63.9	64.2	64.4	64.3	64.4

Note: Quarterly data seasonally adjusted

Source: Commission services

Reversing the rise in unemployment and bringing people back into work will take longer than turning the economy around. It will be important that Member States address unemployment through labour market measures, including active inclusion strategies, in line with the principles agreed by the European Council.

3.2.4 Public finances under pressure

Public finances have been hit hard by the crisis with the government deficit set to increase rapidly and peak at 7 ¼% of GDP this year in the EU (three times higher than the 2008 deficit) and to improve slightly in 2011 to around 6 ½% . This surge follows from the working of automatic stabilisers as the economic situation has deteriorated; the discretionary measures taken to support the economy within the framework of the European Economic Recovery Plan; and the stronger-than-usual responsiveness of public revenues to the exceptional decline in economic activity and, as a result, tax bases, which partly reflects the changed composition of growth (towards less tax-rich components). Similarly, public debt is bearing the brunt of the crisis and is expected to increase to 79 ½% of GDP in 2010 in the EU (84 ¾ % in the euro area). A certain improvement is foreseen in the deficit ratio in 2011 as economic activity picks up and temporary measures come to an end. However, the debt ratio remains on an increasing path in view of the still high primary deficit and rising interest payments, which have been only partly offset by the recovery in nominal GDP growth. Although a one-off increase in government debt does not in itself put public-finance sustainability at risk, in combination with sustained large deficits, lower potential output and an unfavourable

demographic development, the debt evolution is a source of concern for long-term sustainability.

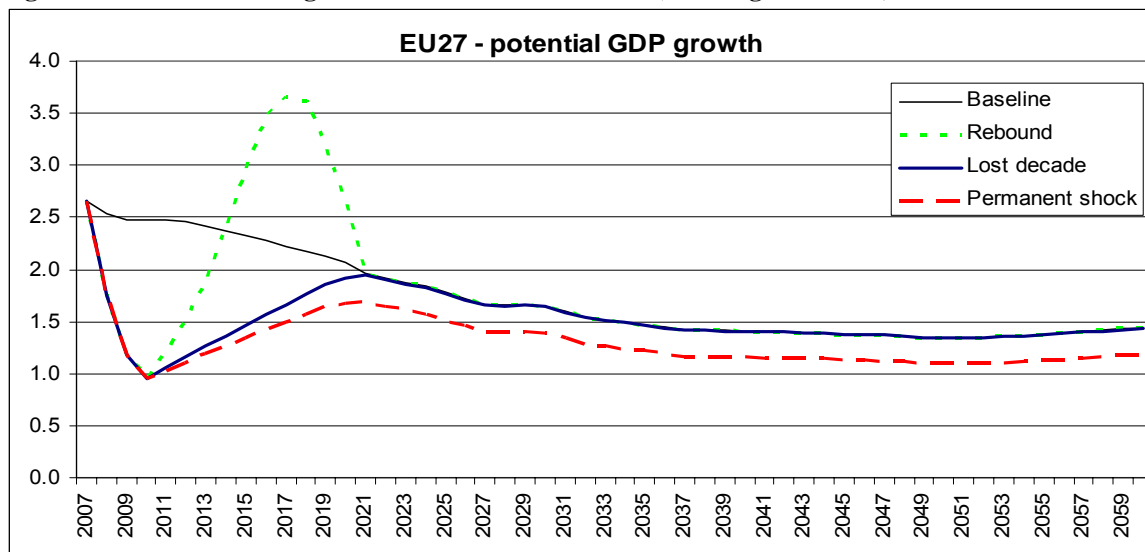
3.3 The potential long-term impact of the current economic crisis

The severe financial and economic crisis that started taking hold in 2008 has prompted the question of the extent to which the worsened short-term outlook would have implications also over the medium- and longer-term. The AWG/EPC baseline macro-economic projections are based on the Commission's forecast made in Spring 2008 (up to 2009). Inevitably, the crisis has led the Commission and other prominent policy makers to substantially revise their short-term forecast downwards. In view of the large uncertainty regarding the length of the slump in economic activity, three scenarios were considered: (i) a pessimistic scenario: 'permanent shock'; (ii) a less pessimistic scenario: 'lost decade', and; (iii) an optimistic scenario: 'rebound'. These scenarios were prepared on the basis of the Commission's Spring 2009 forecast²⁷.

Over the period 2007-20, the annual growth rate in EU27 is 0.8 to 0.9 p.p. lower in the lost decade and permanent shock scenario, respectively. Potential GDP growth for the EU27 coincides with the AWG baseline from 2020 in the 'lost decade' and 'rebound' scenarios, while it is slower in the 'permanent shock' scenario. Over the entire projection period 2007-2060, the average revision of potential GDP growth in the 'lost decade' scenario is 0.2 p.p. per year for the EU27. In the worst case 'permanent shock' scenario, a larger downward revision of the average annual GDP growth by 0.4 p.p. would materialize.

²⁷ See Annex13 for additional details on the analysis of the crisis and European Commission (2009), "Impact of the current economic and financial crisis on potential output", European Economy, Occasional Papers No. 4.

Figure 15 - Potential GDP growth under different shocks (annual growth rate)



Source: Commission services, 2009 Sustainability Report.

All scenarios show a reduction in GDP per capita over the medium-term relative to the baseline, of between 6% and 9% already by 2015. If the recovery from the crisis is characterized by a protracted period of subdued potential growth (to 2020), the loss in GDP per capita relative to the baseline is around 11% in 2020 – a 'lost decade' - and this loss is carried over the rest of the projection period, since the growth projection remains broadly unchanged as of 2020. A more marked reduction in the GDP per capita level would occur if the growth potential is negatively affected permanently (a 'permanent shock'), leading to GDP per capita in 2060 being about 20% lower than in the baseline.

Table 7 - GDP per capita developments in EU27, difference from the AWG baseline, in %

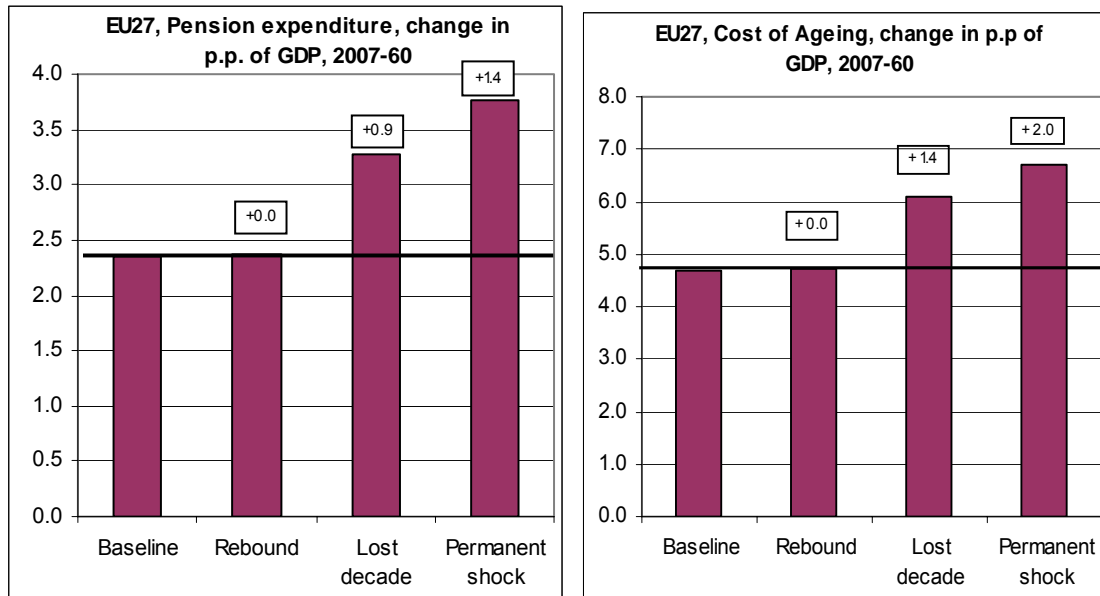
EU27, GDP per capita, diff. from baseline (in %)					
	2010	2015	2020	2040	2060
Rebound	-2	-6	0	0	0
Lost decade	-2	-9	-11	-11	-11
Permanent shock	-2	-9	-12	-16	-20

Source: Commission services, 2009 Sustainability Report.

The budgetary implications of sluggish growth would depend on its duration. If the EU economies were to return to the potential growth path prior to the crisis (the lost decade scenario), the additional increase in pension expenditure would be 0.9 p.p. of GDP higher. If however the EU's growth potential would be affected also in the long-term (permanent shock), public pension spending would be 1.4 p.p. of GDP higher than in the baseline. Considering the full cost of ageing, the additional expenditure increase would be 1.4 p.p. the lost decade scenario and 2 p.p. of GDP permanent shock, respectively. These scenarios are tentative and aim at showing the possible deterioration of GDP levels and public expenditure²⁸.

²⁸ Specially, in countries such as Spain, where immigration has dropped during the crisis, this tentative pension projection could overestimate the number of future new pensions and corresponding spending.

Figure 16 - Potential budgetary impact of the economic crisis (pension and total age-related expenditure)



Source: Commission services, 2009 Sustainability Report.

This illustrates that a permanent shock assumed to occur to the key determinants of potential growth (employment and labour productivity growth), over the very long-term, has a stronger effect on future GDP and per capita income levels than even a very protracted period of sluggish growth. The estimations show that the budgetary impact is stronger in the case of a permanent shock than in the case of a temporary shock, even if the latter is stretched over an entire decade. Moreover, the risk of sluggish growth and higher age-related government spending in the 'lost decade' scenario up to 2020 can be offset if timely, targeted and well coordinated policies would not only bring Europe out of the slump, but would also lead to a rebound of growth such that the temporary shock is also reverted, as illustrated in the 'rebound' scenario. Hence, getting the policy response right in a coordinated manner would limit the loss of wealth creation in Europe and would also lead to less expenditure than would otherwise be the case.

3.4 The impact of the crisis on fiscal sustainability positions

Using the tentative crisis scenarios described above, it is possible to estimate its impact on the sustainability indicators. This analysis is useful in showing trends of increase but should be interpreted with caution as it relies on tentative scenarios. However, there is a degree of uncertainty when estimating the structural budgetary position at this juncture and the Initial Budgetary Position component does not take into account fiscal consolidation measures already implemented by Member States (see Annex 14). The results show the effect of the different outcomes for GDP growth on sustainability, but do not account for the additional costs associated with the fiscal cost of the recovery measures which will add to the stock of debt and increase the primary surplus required to service the debt. If these additional costs were added on, an increase in the gap through the IBP component would emerge. While this is not insignificant, it is not as large as the overall effect of ageing and is also highly uncertain as the final fiscal cost of the crisis

will depend on the ability of governments to recoup some or all of the funds they used for the recapitalisation of banks and on which share of contingent liabilities borne by the government in the context of the crisis (for example State guarantees to deposits and to liabilities issued by the banks) will materialise.

For the 'rebound' scenario, the differences with the baseline are all in the short-term, and cancel each other out over the long-term. Conversely, for both the other scenarios, the lasting impact of the economic crisis puts more pressure on the sustainability of the public finances. While the lost decade scenario assumes a return to previously expected trend growth, the lower productivity growth for ten years and the lower output that results is forecast to increase the sustainability gap as measured by the S2 indicator of 1.1% of GDP to 6.0% of GDP for EU 27. According to the Commission's estimates, this increase is essentially driven by an increase in the long-term cost of ageing, as an unchanged assumption about inflation and therefore the up-rating of pensions leads to higher spending as a share of the (lower) GDP.

In the case of the permanent shock the effect of the crisis on long-term sustainability is more marked, as both the productivity and GDP growth are assumed to be on a lower trajectory going forward. This leads to an ever growing difference in output levels and an increase in the sustainability gap of 1.5% of GDP. This is primarily due to higher long term costs of ageing, but the initial budgetary position also contributes more to the gap due to the lower GDP growth. Although the analysis undertaken is primarily a partial equilibrium exercise, in the case of the permanent shock scenario, a departure from the permanent real interest rate of 3% has been made. Instead, it is assumed that the interest rate and GDP growth rate differential remains constant, so that interest rates in this case are lower than in the baseline. This is because with a permanent change in the trend rate of output it would be expected that there is additionally an effect on the return to capital and therefore the interest rate.

3.5 The impact of the crisis on pension schemes and its social consequences

With the financial crisis and the economic downturn, Member States have had to assess the short- and longer-term impacts on the various elements in their pension schemes. The crisis adds to the economic impact of demographic ageing on pension provision, although the consequences will critically depend on the depth and length of the downturn. For public "pay-as-you-go" pension systems, the slowing of the real economy is bringing additional fiscal pressures on financing and contributions. For funded schemes, the crisis has exposed their vulnerabilities in financial markets. The crisis has shown the need for the right balance between PAYG systems and fully funded systems. The concrete impact of the crisis on pension schemes over the long-term and its social consequences remains to be seen. Further work is necessary to pinpoint the relative merits of the various pension scheme designs.

3.5.1 Statutory State Pay-As-You-Go (PAYG) pensions

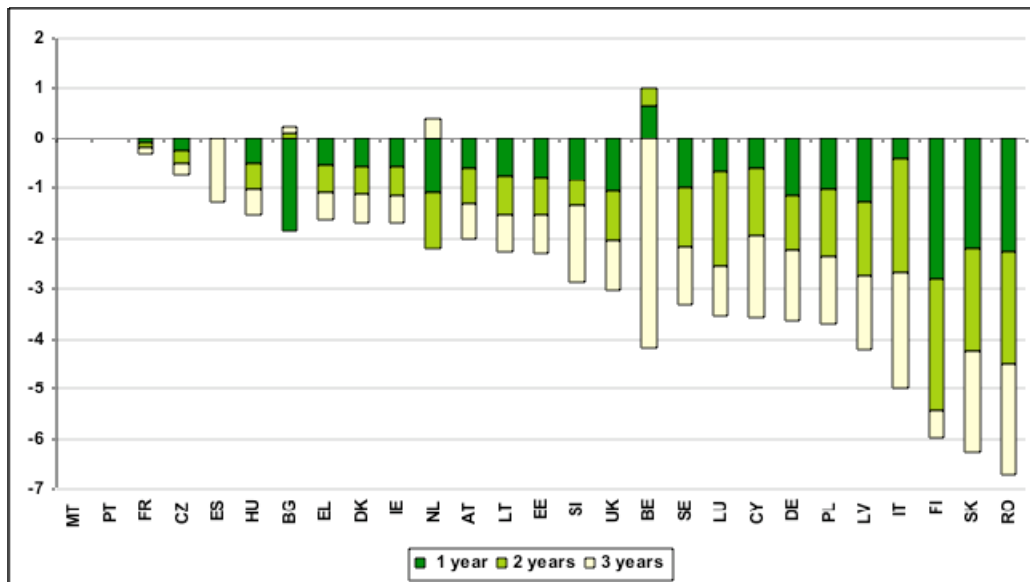
The overall pension income of people retiring today in Europe is provided by statutory state pensions funded on a pay-as-you-go (PAYG) basis and it is projected to remain so except in a few Member States in the coming decades (cf. SPC 2005). Pensioners have on average been relatively little affected by the crisis so far, and the majority of Member States have preferred to accept increased deficits to let pension systems play the role of automatic stabilisers.

The effect of the crisis on different cohorts of pensioners varies notably depending on how much future pension systems will differ from the current arrangements.

In most Member States, most retired cohorts today obtain their pensions under changing rules but providing for guaranteed pension levels. Budgetary restrictions have led to cuts in public pension payments only in a few Member States, and in some others the impacts took form of lower indexation. In general, Member States in the majority of cases are keeping their promises towards current pensioners.

On the basis of projected theoretical replacement rates it is possible to analyse the impact of career breaks on pension entitlements. Younger cohorts in reformed schemes might be affected to some extent depending on the design of the scheme. As benefits in PAYG schemes are increasingly calculated on life-time earnings-related contributions, long-term unemployment can negatively affect the accruals of pension entitlements, having an adverse effect on individual pensions in the long-term. Protecting the pension entitlements of future pensioners during periods of unemployment is an emerging challenge in most pension systems across the EU. The risk of short periods of unemployment is well covered by public pension schemes in many Member States. Nevertheless, it is definitely less true for long periods and funded pensions (for impact of unemployment on the level of theoretical replacement rate see Figure 17).

Figure 17 - Accumulated difference in net theoretical replacement rates for an average earner entering the labour market at 25 and retiring at the statutory retirement age with a 1, 2 or 3 year career break due to unemployment compared with no break*



Source: SPC/ISG*. The unemployment break is assumed to take place in the years just prior to old age retirement which is assumed here to be the statutory retirement age for men. Note: the values for MT and PT are equal to 0 and should not be interpreted as missing.

Moreover, following the crisis, some Member States decided to increase contribution rates, and others have introduced increases in the pensionable age (e.g. HU) or are considering to do so (e.g. EL, ES, IE, LV, SI, and RO). In consequence, the burden of adjustment in terms of longer working and higher contribution rates will fall primarily onto the currently working population.

3.5.2 Funded defined-benefit and hybrid pension schemes ²⁹

In an occupational defined-benefit (DB) scheme, benefits accrued are linked to earnings and the employment career. It is the scheme sponsor who bears the investment risk and often also the longevity risk. A promise is made to the scheme member (the "defined benefit").

The financial crisis saw a fall in asset values and often the assumptions made about investment returns have not been met. The regulatory framework at both EU and national level is there to ensure that pension funds take action early to address funding levels in order to safeguard their long term health. Member State reactions to the problems with funded schemes have in the short term been pragmatic. National pension supervisory authorities have aimed to allow pension funds more flexibility than normal, e.g. funds were given more time to submit funding status reports and recovery plans, and the normal maximum period allowed for recovery from deficits has been extended.

In schemes with conditionality rules (e.g. conditional indexation) pensioners could have been affected, e.g. by no indexation, or, in more extreme circumstances, by a reduction in

²⁹ For further information on the impact of the crisis on defined benefit pensions, see 2010 Joint Report on Social Protection and Social Inclusion and its supporting documents.

the pension, and they would bear more of the cost than scheme members still accruing rights. Adjustments to indexation are especially used when schemes are closed to new members.

If the crisis has pushed the employer out of business, the Insolvency Directive provides some protection if the pension fund is in deficit when an employer is insolvent. Insurance type fall-back arrangements may assist pension scheme members in these circumstances, but such assistance may be less generous than the pension would otherwise have been.

In the medium term, the sponsor can foot the bill of the recovery plan, or can ask social partners for agreement to increase employee contributions (without increasing pension rights). The sponsoring employer can also decide that the level of investment risk, as witnessed by the financial crisis, means that accrual rates should be reduced. Other measures could include increasing the pensionable age, introducing a defined-contribution element to the scheme, increasing conditionality rules or even closing the scheme to future accruals.

Dialogue between social partners is often a key element behind the recovery plans, as they involve attempts to share the impacts not only over time but also between different parties. A greater sharing of risks between scheme members and employers may be needed if the decline in DB provision is to be halted and such schemes are to have a viable future.

In DB and hybrid schemes the crisis brings to light questions around intergenerational fairness and redistribution: if scheme rules operate with conditionality on investment performance, pensioners are likely to be comparatively more affected than those still accruing rights. However, if assets are rebalanced with increased employee contribution or change in future benefit accruals, this will proportionately affect active members more. The impact of the crisis on the willingness of DB scheme sponsors to offer such schemes in the future, given the existing regulatory framework, remains to be seen.

3.5.3 Funded defined-contribution pension schemes ³⁰

In a defined-contribution (DC) plan, the scheme member bears the investment risk and is directly affected by investment performance. Overall, private pension funds lost more than 20% of their value in the course of 2008, but many pension funds have been able to recoup some of their losses since then³¹. The member is at risk of poor performance but benefits from any positive performance. Volatility is a fact of life in these plans; for all the concern sparked by the crisis, in many Member States DC funds have recovered well in 2009 and early 2010, regaining much of the value lost in 2008 (more than 20%), so that those some way from retirement have largely recovered their positions.

For those some way from retirement there may be time for asset values to recover or recover partially. But for those close to retirement the impact can be real, leading to lower than expected pension incomes, or delayed retirement. However, the crisis impact is likely to have been mitigated by investment strategies such as "lifestyling" (which

³⁰ For further information on the impact of the crisis on defined contribution pensions, see 2010 Joint Report on Social Protection and Social Inclusion and its supporting documents.

³¹ See OECD "Pension Markets in Focus". October 2009, Issue 6.

implies higher investment risk when scheme member is younger) or cautious investments, as well as by the fact that only a few individuals currently retiring will be relying mainly on a DC pension outcome.

In some Member States the market has also successfully responded to the issues posed by DC by developing different investment and decumulation strategies which are designed to maximise choice and flexibility for members. Investment strategies such as Target Date Funds and DC Banking are designed to work on similar lines to lifestyling, while in the decumulation phase there is considerable choice on annuity purchases and over whether to draw an income from the fund whilst leaving it invested.

The choice between investment strategies with different potential rates of return and levels of risk leads to questions as to the accuracy of information. In statutory schemes where there was a choice between continuing in DB PAYG schemes or moving part of the contributions to the new DC funded scheme, people often opted for a defined-contribution scheme even if it was questionable whether this was indeed the best solution for them. And regarding the choice of pension funds and investment strategies, evidence suggests that many people went for riskier options than would have been justified given their earning capacity and the length of their working life. These choices were driven by the information people received at the time. Rates of return observed in the past and the positive growth expectations for central and eastern European countries obviously played a role. Hence, access to unbiased information is of key importance and not only in funded defined-contribution schemes.

A common feature for Member States that have introduced statutory DC schemes is the need to shoulder net transition costs. Often Member States divert part of the contribution from the PAYG scheme into the funded scheme while covering the shortfall from the state budget through general taxation. Other strategies have included increasing total contribution rates to pension schemes, using revenues from privatising state enterprises, or shifting part of the cost to current pensioners, e.g. through the introduction of less favourable indexation rules, or to future beneficiaries of the PAYG schemes³².

The reforms usually made participation in the funded scheme mandatory for younger generations, while people nearing retirement were excluded, and intermediate cohorts had the choice to join or not. In some Member States, however, the net transition costs turned out to be higher than anticipated, as the numbers of workers who moved to the mixed PAYG-funded system considerably exceeded official estimates.

Bringing forward costs by increasing pre-funding has placed strains on Members States' fiscal positions, and the current economic situation provides a serious stress test of the viability of such arrangements. Facing a growing fiscal gap, some Member States have decided to limit the relative burden of pre-funding future pension expenditure by reducing the proportion of social security contributions diverted to mandatory DC schemes. In consequence, pre-crisis projections of future importance of funded schemes in pensioner income might be in some cases overestimated.

³² According to the 2008 SPC study "Privately Managed Funded Pension Provision and their Contribution to Adequate and Sustainable Pensions", pp.18-19.

Despite the anti-cyclical effect of reducing the cost of pre-funding by shifting part of contributions from mandatory funded schemes to PAYG schemes, i.e. shrinking the aggregate savings rate, strong arguments against decreasing the pre-funding burden could be found. The inflow of contributions to funded schemes is reduced when prices of assets are low and offer greater growth prospects. This might imply a decline in the expected rates of return. While it is understandable that public authorities see the need to adjust their mandatory private funded schemes, one should not forget that pension systems need stability over the long term and should be designed to weather both in good and bad economic times if they are to have the necessary credibility among citizens. Hence, transparency and long-term planning are important.

Unemployment may affect the accruals of pension entitlements much more in funded DC systems than in DB systems. In most funded DC systems, there is no contributions in case of unemployment, whereas in DB systems, often unemployment generates some rights.

To sum up, moving towards more private sector funded pension provision can help reduce explicit public finance liabilities, but it also creates new challenges and forms of risks. Variations in the ability of funded schemes to weather the present crisis show that differences in design, regulation and investment strategy matter. Achieving a better balance for pension savers and pension providers between risks, security and sustainability will be key to enhance public confidence in funded pensions and ensure their contribution to adequacy.

4 Policy challenges over the long-term

4.1 *Securing sustainable and adequate pensions*

Ensuring that public policies cater for sustainable, accessible and adequate retirement incomes remains a priority for economic policies in the EU. While Member States share similar fundamental challenges, the situation differs considerably across the Union, both in terms of demographic prospects, growth potential (catching up effects), design of pension (and welfare system) arrangements and in terms of constraints on account of the fiscal situation and external competitiveness. For several countries where the pension reforms process has not been set in motion, the pre-crisis message firmly remains; there is a need to align the 'pension promise' with what the rest of the economy can be expected to support. For other countries, additional reforms might be needed to ensure the lasting success of already implemented pension reforms.

There has been considerable progress in the last decade in analysing and assessing the challenges to pension policy posed in particular by population ageing. Several Member States now pay due consideration in their medium-term budgetary planning to the long-term sustainability and viability of public spending programmes and to the future fiscal positions overall. The EU fiscal framework – strengthened with the 2005 reform of the Stability and Growth Pact – explicitly addresses the link between medium-term budgetary policies and long-term trends that can affect fiscal positions. In particular, the structural budgetary targets – the Medium-Term Budgetary Objectives (MTOs) – that Member States have set take account of the future pressures on public budgets that arise from demographic transition to an older population.

In this respect, structural policies, including modern social protection systems, and their contribution to employment, productivity and economic growth is at the heart of policy-making. This involves all aspects of pension policy:

- striking the right balance between the role of public and private tiers, including the importance of the public schemes in providing (minimum) retirement income, capacity of private tiers to support retirement incomes, issues related to the extent to which the regulatory framework for private pensions ensure efficiency and security and facilitate labour mobility at national and European level);
- eligibility criteria (prolonging working lives, adjusting the retirement age);
- definition of pension system parameters before and after retirement (accumulation and valorisation of pension rights, and indexation of pension benefits after retirement), and improving the functioning of pension policy, providing sustainable and adequate retirement incomes for older people.

A major challenge will be to create the appropriate conditions for older workers to remain longer in the labour market in the future so as to successfully seize the opportunity to make the EU economies sustainable in the long-term, in view of known challenges like population ageing.

On top of these prospects, the scale of fiscal deterioration as a result of the crisis puts severe constraints on fiscal policies which in combination with pre-existing weaknesses and imbalances are generating an unprecedented need for resolute and coordinated fiscal

consolidation. In addition to the necessity of putting the EU's fiscal house in order, getting structural policies right is also pressing. In fact, it would seem that on account of the crisis and the fast-approaching demographic transition, the strategy agreed by the European Council for coping with an ageing population namely: (i) debt reduction, (ii) productivity and employment enhancing measures; and, (iii) reforms of Member State welfare systems, would have to progress from a 'pick and choose' list to an almost compulsory set of reform priorities.

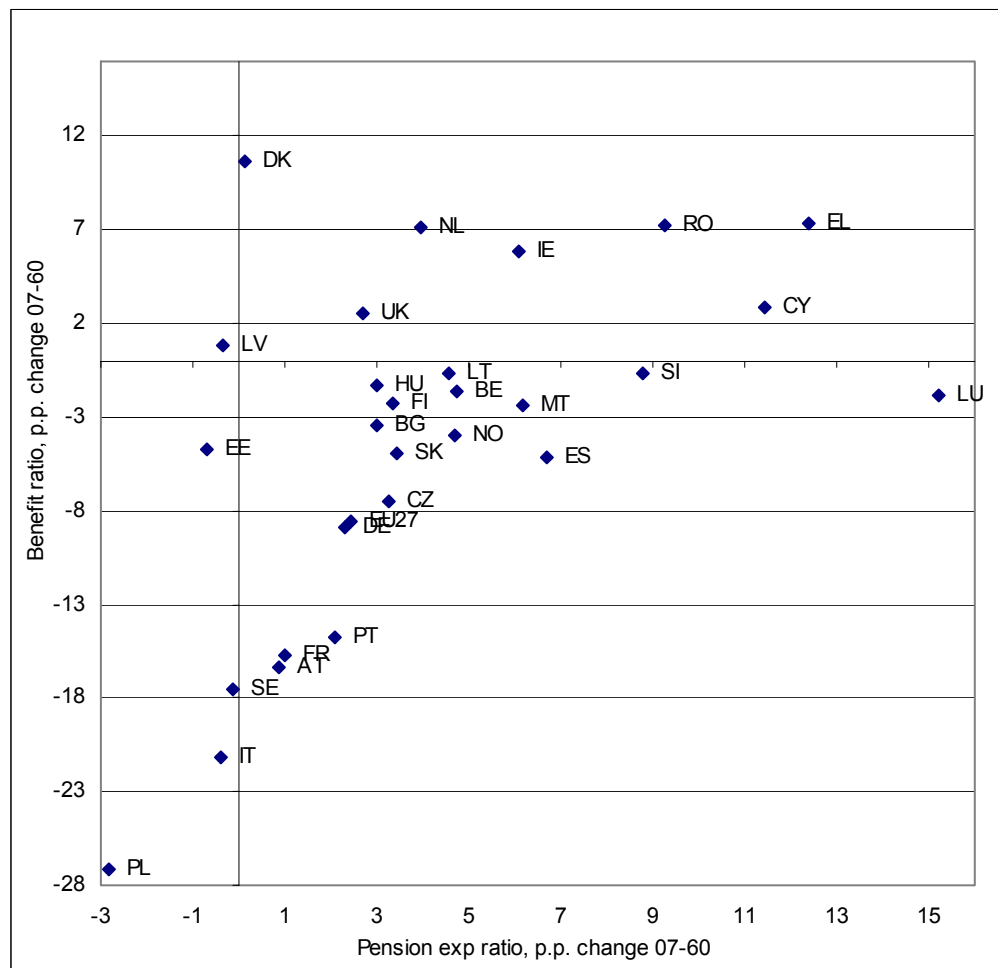
4.2 Main challenges faced by Member States

On the basis of agreed measurements and using calculations by the European Commission and the Member States in the context of the joint long-term budgetary projection exercise and the social OMC, it is possible to graphically represent the future adequacy and sustainability challenges in pensions.³³ Figure 18 shows the scale and scope of challenges to pension policy in Member States in a comprehensive way, combining measurements of future sustainability and adequacy of pensions. It shows the projected evolution of pension expenditure as measure of sustainability and changes in the benefit ratio, as measures of future adequacy. Annex 16 provides detailed graphs with the evolution of pension expenditure and the benefit ratio.³⁴

³³ See the 2009 Ageing Report.

³⁴ See Table 4 in Chapter II for a breakdown of the benefit ratio developments by sector and Annex 5 for more details on replacement rates.

Figure 18 - Pension policy challenges - pension expenditure and benefit ratio



Source: Commission services, 2009 Ageing Report.

Note: The horizontal axis shows the projected change (p.p.) in public pension expenditure as a share of GDP over the period 2007-60. The vertical axis shows the projected change (p.p.) in the benefit ratio over the period 2007-60. The benefit ratio is defined as the average pension in relation to the average wage. The calculation of the benefit ratio includes public pensions and in addition private pensions to the extent this information was available in the 2009 Ageing Report. See the 2009 Ageing Report for further details. Hungary reformed its pension system in 2009. According to the revised pension projections, public pension expenditure is projected to decrease from 10.9% of GDP in 2007 to 10.5% of GDP in 2060, i.e. by 0.4 p.p. of GDP, compared with the projection in the 2009 Ageing Report, where an increase of 3 p.p. of GDP between 2007 and 2060 was projected. The revised projection is not included in this graph (see note to Figure 8).

4.2.1 Upward but uneven pressures on public spending on pensions...

There is a very large diversity across Member States as regards the projected change in public pension expenditure, ranging from a decline of -2.8 p.p. of GDP (PL) to an increase of 15.2 p.p. of GDP (LU):

- The increase in public pension spending will be very significant in several EU Member States (BE, EL, ES, CY, LU, MT, RO, SI and IE) with a projected increase of almost 5 p.p. of GDP or more (and of more than 10 p.p. of GDP in EL, CY and LU)

although for some countries the large increase is from a low level and mainly due to maturing pension systems. For most of the countries with a high projected increase in future pension expenditure, reforming the pension systems must play a significant part in curbing the long-term costs of ageing.

- For a second group of countries – BG, CZ, DE, LT, NL, SK, FI and the UK - the increase is more limited, but still high, ranging from about 2 p.p. to 5 p.p. of GDP. Several of these countries have taken some steps in reforming pensions that contribute to limit the increase in public expenditure, but further policy action is needed.

- Finally, the increase is more moderate, about to 2 p.p. of GDP or less, in DK, EE, FR, IT, LV, AT, PL, PT HU³⁵, and SE. Most of these countries have implemented substantial pension reforms, in several cases also involving a partial switch to funded, privately managed, pension schemes (EE, LV, PL, HU and SE).

Looking at the composition of public pension expenditure; old-age and early pensions are projected to increase by 2.4% of GDP between 2007 and 2060 in the EU. In the euro area, the increase is projected to be slightly higher at 2.6% of GDP. A smaller increase is projected for other pension expenditure, mainly disability and survivor pensions, increasing only slightly by 0.1. p.p. of GDP in the euro area. It should be stressed that the ratio has been pushed downwards due to a shift from public scheme towards private mandatory schemes in BG, EE, LV, LT, HU, PL, SK and SE.³⁶

As regards spending on disability and survivor pensions, they are projected to decrease in the majority of countries. Only in 8 Member States (PT, RO, SI, SK, FI, SE and UK) is it projected to increase, although only slightly.

Nonetheless, public spending on pensions as a share of GDP is likely to continue to increase in coming decades. Further spending pressures are likely also in other areas, such as health care (Annex 15 provides projections for all age-related expenditure items).

4.2.2 ...coupled with potential calls for higher retirement incomes...

In general, as it currently stands, the projected increase in pension expenditure as a share of GDP is not likely to be coupled with improvements in pension adequacy.

Looking at the development of the net theoretical replacement rates³⁷ (see Figure 5), in many Member States the upward trend in pension spending goes together with a downward trend in the net theoretical replacement rate for a theoretical individual retiring at a given age under given assumptions (CZ, FR, EL, ES, FI, IE, LV, LT, MT, PT and UK). In other countries we can expect an increase in pension expenditure concomitant to higher theoretical replacement rates (as in AT, BE, BG, CY, DE, DK, HU, IT, NL, RO,

³⁵ See note to Figure 8.

³⁶ In the case of LU, the pension projection is affected by the considerable number of cross border workers who will in the future years receive a pension from the LU social security scheme, but at the same time will not be registered as LU inhabitants. Due to this peculiar circumstance, LU can not be, in same cases, strictly compared with other MS.

³⁷ For more detailed information see the SPC-ISG report "Updates of current and prospective theoretical pension replacement rates 2006-2046",
<http://ec.europa.eu/social/main.jsp?langId=en&catId=752&newsId=551&furtherNews=yes>

SI and SK) or pension expenditure cuts concomitant to lower replacement rates ³⁸(PL and SE). Only in EE are synergies for more adequate and sustainable pensions projected in the long-term. It should also be noted that EE, like other countries with a more positive evolution in replacement rates (RO, BG and CY) start off from rather low initial levels of the theoretical rates.

For the EU-27 as a whole, the net theoretical replacement rates are projected to decline by 4.25 pp or 5.4% drop with respect to the initial level (GDP-weighted averages).

The changes in theoretical replacement rates allow for monitoring how enacted reforms affect future pensions for given situations and under given assumptions (for example, a certain career length and retirement age). However, they do not take account of all factors. For example, rising female labour force participation in all Member States will result in more numerous and probably higher female pensions (if we assume women's careers partially converging to men's). Similarly, the drop in replacement rates should be seen in relation to the fact that more people will be entitled to pensions. Furthermore, two major axes have been developed by Member States to cater for the projected decline in replacement rates at a given age: on the one hand the strengthening of incentives to work longer and on the other hand, the development of supplementary (private) pensions. Thus, for example, calculations for variant cases show that in most Member States if people postpone their retirement this will result in entitlement to higher replacement rates (see Annex 5). Due to reforms of this kind and structural evolutions the trend towards lower theoretical replacement rates can be to a significant extent counterbalanced by working longer and the build-up of supplementary pension entitlements and savings, including higher labour force participation of women in the future, which thus represent also key elements and challenges for pension policy design.

Looking at the development of the (gross) benefit ratio, it is projected to fall by 8.5 p.p. over the period 2007-2060 for the EU as a whole: the value of the ratio drops from 52 in 2007 to 43.5 in 2060, that is, a 16.4% with respect to the initial level.

In the majority of countries the benefit ratio is projected to fall in the long-term:

- In countries like FR, IT, AT, PL, PT, SE, DE and CZ average pensions in relation to average income (the benefit ratio) are projected to fall considerably by 2060 (i.e. by at least 7.5 p.p. and at least 17% with respect to the initial levels of the corresponding country in 2007). As indicated above, unless policies change, the pressures on the government to support pensions in these countries are likely to be large.
- In other countries the fall in the benefit ratio is more limited though still sizeable: EE, SK, ES, BG, MT, BE, FI, LU, HU, LT, SI would see their benefit ratios drop by up to 5.1 pp and by 10.9% with respect to the initial levels in 2007³⁹.
- Finally, the benefit ratio is projected to raise by up to 10.6 pp in a few countries (RO, DK, IE, EL, NL, UK, CY, LV). In all these countries but LV the increase in the benefit ratio comes together with upward pressures on the pension expenditures.

³⁸ Lower replacement rates can result from reforms that lower the pension benefit or reduce access to early pension disability pension schemes.

³⁹ With the exception of EE in this grouping, as its benefit ratio is projected to fall by 2060 by 4.6 pp and 17.7% with respect to its initial level of the ratio in 2007.

To get the full picture it is important to consider also the level of pension benefits, and not only its evolution over the long-term. Thus, the situation might be challenging for countries where the benefit ratio is projected to be around one third or less in 2060 on current policies.

Whether measured by the replacement rates or by the benefit ratio securing the future adequacy of pensions remains a challenge.

It is difficult to pinpoint a specific level where the average pension becomes too low in terms of social and political sustainability. However, it is conceivable that a strong reduction in relative pensions over time will generate pressure on total public spending regardless of the legislation and policies in place. Moreover, where average pensions are low today in relative terms, the pressures might be higher than where they are relatively higher, due to risks of expanding poverty.

However, pressures for higher pensions are not only an issue for countries with relatively low pensions on a comparative basis. In countries with a high pension in relative terms, a societal expectation for the continuation of the current situation may develop. This would indicate that, apart from the need of further reforms and modernisation, careful preparation and information on the future pension promise will be necessary to ensure the lasting success of reforms.

In brief, the analysis of the two indicators of future relative pension levels compared with future pension expenditure suggests that:

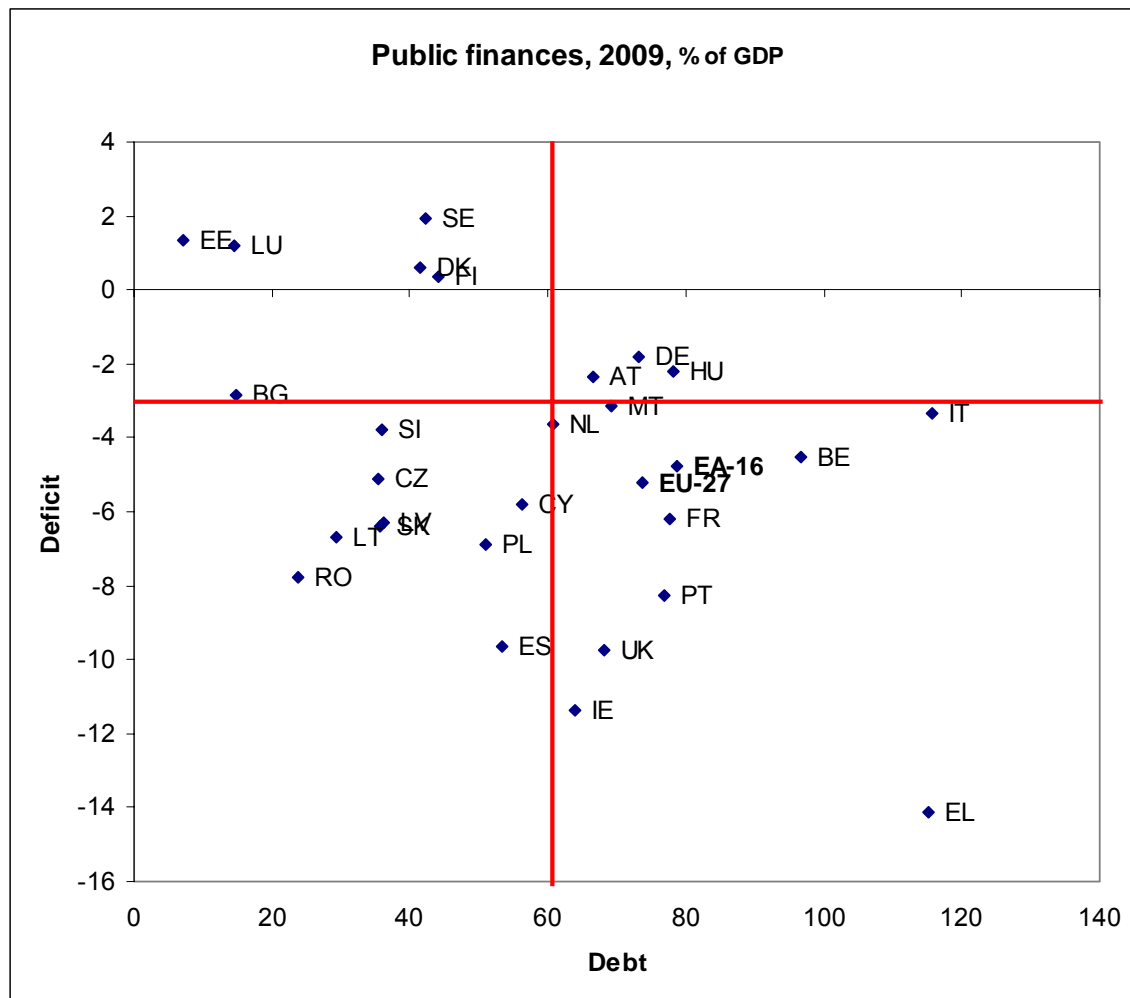
- Reforms implemented with a view to strengthening the sustainability of public pension arrangements have resulted in often relatively limited reductions in replacement rates at a given age over the long-term in the EU as a whole. This contributes to stability in pensions which is crucial for individuals when planning their savings and consumption over time. For some countries, however, the reduction in replacement rates may be substantial.
- Strong declines in relative pensions will primarily affect those with very long retirement periods. Safeguarding relatively stable replacement rates while enhancing strongly the sustainability of the public pension system though price indexation after retirement entails the risk of public pensions becoming too low over time compared to wages. Those with lower life expectancy at withdrawal would be much less affected. This could mean that older pensioners will become more at risk of poverty; however evidence suggests that individuals with high life expectancy at retirement generally have had fuller working careers, earned higher salaries and hence accumulate higher entitlements. This group is also most prone to have accumulated private retirement savings.

4.2.3 ...at a time when fiscal conditions are more strained than ever...

The EU's short-term response to the crisis has worked well but the time has now come to design and communicate robust exit strategies. The European Union responded strongly in 2008 and 2009 to keep the major short-term risks of the crisis from materialising. The substantial support to financial institutions helped avert a meltdown and stabilise the financial sector. The implementation of the European Economic Recovery Plan (EERP)

proved effective in containing the immediate economic and social impact of the crisis. Close co-ordination of these policies at EU level played a major role in rendering their implementation effective and in enhancing their positive effect on confidence.

Figure 19 - Public finances in EU Member States in 2009



Source: Commission services, AMECO.

Note: The 'deficit' is the cyclically adjusted budget balance of general government (based on potential GDP) estimated on the basis of the Commission spring 2010 forecast. The 'debt' is the general government consolidated gross debt at year end as given in the Commission spring 2010 forecast.

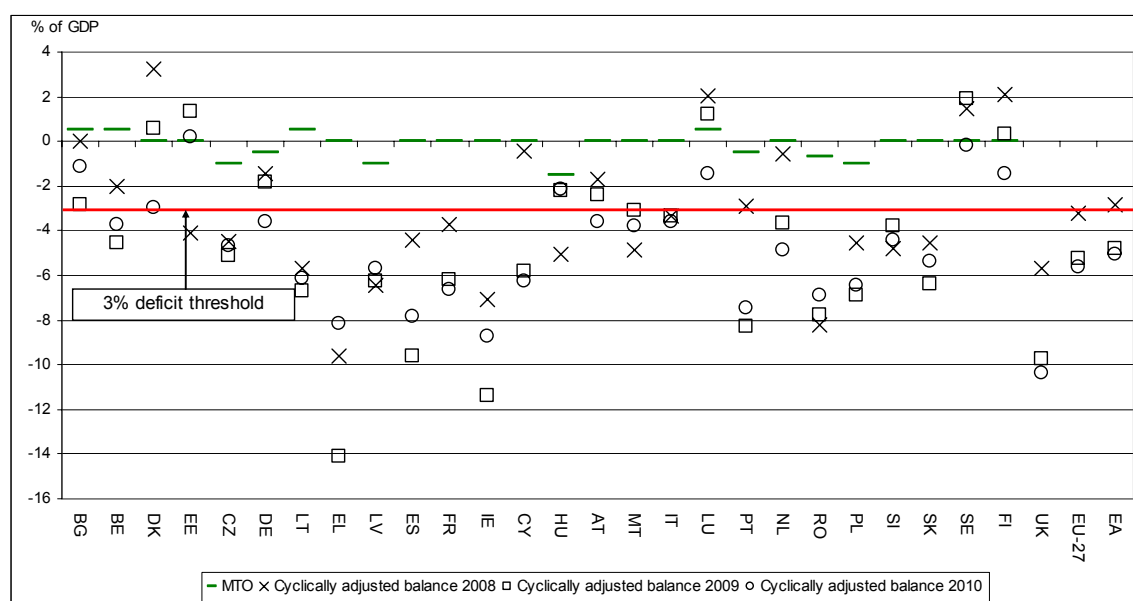
However, combined with the wider effects of the crisis, these measures have come at a very significant budgetary cost. The structural deficit stood at 5 ¼ % of GDP in 2009 and the debt position at 74% at end-2009 in the EU (see Figure 19). This is the worst position observed in the EU since 1970 in terms of debt level (see Annex 12). In 2009, only six Member States (EE, BG, LU, DK, SE and FI) complied with the basic fiscal rules in the EU⁴⁰. Almost half of the Member States (EL, IE, UK, ES, PT, RO, PL, LT, SK, LV, FR, CY and CZ) had a structural deficit of more than 5% of GDP. Eleven countries (NL, IE,

⁴⁰ It should be noted that the EU fiscal rules are applicable to the actual deficits, but that the structural deficits are taken into consideration too (see Article 104 of the Treaty and the related legislation that forms the Stability and Growth Pact).

AT, UK, MT, DE, PT, FR, HU, BE, EL and IT) had a debt ratio above the 60% of GDP Treaty reference value. For some of the countries with too high deficit and debt ratios (NL, IE, UK, MT, PT, FR, BE, EL and IT) the situation may entail risks.⁴¹

In 2010, almost no Member State is expected to attain their MTO (see Figure 20).⁴² A large majority of them has a long way to go not only to reach the MTOs, but also to comply with the Treaty's 3% deficit threshold. Annex 17 shows that considerable fiscal consolidation over a protracted period of time would be necessary so as to put the debt-to-GDP ratio on a descending path.

Figure 20 - Medium-term budgetary objectives (MTO) and fiscal positions, % of GDP



Source: Commission services, AMECO.

Note: The MTOs are those of the 2009/101 SCPs. The cyclically adjusted balances are those of the Commission services Spring 2010 forecast.

4.2.4 ...the crisis has clearly exposed the interdependence of the various pension pillars

The crisis has clearly exposed the interdependence of the various pension tiers within each Member State and the importance of a European approach to pension systems, notably on fiscal sustainability, solvency and social adequacy.

The crisis made it clear that as rates of return can turn negative at times, funded pensions need to be underpinned by a solid, public scheme. Moreover, the effects of fluctuations in the markets can be mitigated with appropriate policies, e.g. mandatory lifestyling. Need for safety in pensions and a need for economic growth are other aspects brought by the crisis. Safety because EU citizens are concerned about income both when working (earnings) and when retired (pensions). Growth because it enables higher income and

⁴¹ See Chapter III, for the evolution of public finances in a longer-term perspective.

⁴² The cyclically-adjusted balance is estimated on the basis of the Commission's Autumn 2009 forecast.

increased living standards for all and because it is a prerequisite for having sustainable and adequate pensions. These are issues which are at the heart of economic policy making in the EU, providing a clear link with the overall EU 2020 strategy. They also raise the issue of the extent to which the current governance framework for pension policy in the EU is able to deliver on these fronts.

The economic crisis has revealed that there is a need for an in-depth and open discussion about pension systems in Europe, in particular about the relative role, design and performance of private pension pillars. All private retirement savings plans (and mandatory private individual accounts) rely on financial markets. In the field of funded pensions, many private (but also public reserves) pension funds saw the book value of their investments dwindle as stock markets tumbled. Funding ratios of defined-benefit schemes have also been impacted by falls in market interest rates used to measure future liabilities in net present value terms. Funded pension arrangements, particularly those which are collective in nature and where the scheme member does not take all the risk, but share it, have proved to be quite resilient in the shorter term. In many Member States, DC funds have recovered well in 2009 and early 2010, regaining much of the value lost in 2008 (more than 20%), so that those some way from retirement have largely recovered their positions. The impact of these falls has also stress tested to the limit adjustment mechanisms in funded DB schemes and exposed some weaknesses.

4.3 Conclusions

There has been considerable progress in reforming pension arrangements in the last decade. While system designs differ markedly between Member States, a majority have adapted their pension systems so as to better withstand the demographic change that will start taking hold already next decade.

Despite this progress, in many EU Member States the challenge of transforming systems of pension provision to better cope with an ageing population is still very real. According to the most recent Eurostat projections, the size of the working-age population (15-64) will start shrinking from 2012. Potential economic growth will have to rely less on an increase in labour supply and more on productivity-enhancing measures. This will have far-reaching consequences for economic and budgetary developments.

On top of these prospects, the financial and economic crisis has led to a sharp deterioration in the public finances; public deficits and debt levels have increased sharply, which is putting stress also on social protection-related public spending programmes. Moreover, in the field of pensions, many private pension funds have seen their investments fall in value, and there is uncertainty as to when and to what extent these investments will be recovered.

As a result, there is a need to carefully review pension policy in the context of the aftermath of the crisis and the overall Europe 2020 vision, taking a holistic approach in view of delivering sustainable and adequate retirement incomes. This call for policy that builds on the many interlinkages between labour markets, social protection systems, financial market policies, and migration policies and develops the synergies necessary to deliver pension that are adequate and sustainable.

4.3.1 Most reforms provide stronger work incentives to contribute to sustainability...

A tightening of the eligibility criteria for a public pension (higher pensionable age, reduced access to early retirement) is expected to help constrain the growth in public pension expenditure in almost every Member State. Most pension reforms aim to support higher participation rates of older workers by offering economic incentives to increase the effective retirement age. Achieving the necessary extension in working lives will prove challenging as adjustments will be needed in the expectations and behaviour of citizens.

In some countries, the scale of reforms to public pension systems has been insufficient and there is a critical need for ensuring that retirement behaviour takes due account of future increases in life expectancy.

Higher participation and employment rates are needed. But there are currently many hard and soft barriers that limit the extent to which older workers can extend their working life, including health status. Despite considerable progress more policy action is necessary. Structural reforms, including the flexicurity approach, may provide stronger work incentives, for instance.

The employment rate for women still lags behind that of men. While employment rates for older workers have increased considerably in recent years only around 50% of people are still in employment by the age of 60. Raising the employment rates of older workers, including those over 65 will be crucial for the ability of Member States to smooth the transition from large to smaller cohorts and deliver adequate and sustainable pensions. Underemployed older workers, middle-aged women and migrants represent a huge untapped resource for the European economy.

4.3.2 ...and if incentives stimulate working longer they will also contribute to adequacy...

Higher employment rates can lead to very large welfare gains. Higher employment does not, per se, lead to lower public spending on pensions as a share of GDP as higher or longer employment can result in the accumulation of greater and more adequate pension entitlements, thus contributing to social sustainability. However, measures which raise employment do strengthen the financial sustainability of pension systems by delaying the onset of expenditure rises and through increased contributions and GDP growth.

Achieving the necessary extension in working lives will not be easy. It not only requires that tax/benefit and wage systems provide financial incentives for people to remain economically active and invest in building their own human capital, but it also means that there must be job opportunities for older people. Policies to tackle age-related discrimination and to promote life-long learning, flexible retirement pathways and healthy and flexible work conditions also need to be considered. Perhaps the most challenging aspect of efforts to increase effective retirement ages is the need to change the expectations and behaviour of employers and employees alike. Moreover, the concept of ageing is evolving, and with life expectancy projected to continue rising, retirement behaviour may also need to adjust continuously.

4.3.3 ...still adequacy concerns might increase

Reduced relative levels of public pensions compared to average wages are one of the methods for reducing age-related pressure on the public finances. The analysis shows that in the EU average public pension benefits are rising more slowly than wages and replacement incomes at the time of retirement are falling if people retire at the same age as today. This implies that on average pensioners will experience a relative deterioration in living standards vis-à-vis workers in the future unless they prolong their working lives. The recent EC-EPC projections along with analysis carried out within the framework of Open Method of Coordination in Social Protection and Social Inclusion suggests that future relative pensioners' income will decline substantially in a number of Member States.⁴³

The 2006 Sustainability Report considered the possibility that the risk of inadequate pensions could result in unforeseen pressure for ad hoc increases of pensions or higher demand for other benefits.⁴⁴ Thus the issues of pension adequacy, sustainability and modernisation need to be considered together. Moreover, safety in pensions is important to support adequacy. Moreover, the macroeconomic benefits of making pension systems safer could be felt quickly as pensioners are a growing source of stable and regular consumption. The disparate developments in Member States' pension system and the trend towards defined contribution schemes, however, raise new policy questions. Key instruments to ensure safety are the solvency rules for pension funds and legal protection in case of insolvency of the pension fund and/or of the sponsoring employer. Enhancing transparency, information and awareness can also help. Moreover, financial education is needed so that people are better equipped to make informed decisions regarding their pension benefits.

4.3.4 Continued collaboration at EU level provides value added

Although the framework – the three-pronged Stockholm strategy - for coping with the challenge posed by ageing populations generally remains valid, the crisis has added to the urgency of using a holistic approach to pension policy, taking due account of country-specific differences. Consolidating the public finances and moving towards the medium-term budgetary objectives (MTOs) is essential in order to reduce public debt and to contribute to financing the future increase in public pension expenditure. Thus the crisis has reminded us that good regulation of financial markets is a key component of good pension policy, notably after the last decade of pension reforms. In turn macroeconomic stability is a precondition for financial markets and the pension system to work well. In addition, the crisis has revealed some weaknesses in certain aspects of reformed systems that need addressing. Finally it has exposed a need to review the design of certain aspects of pension policy, in particular the role of funded schemes and the interaction between public and private pillars. There is no single best pension system design for all countries and thus no one-size-fits-all solution in the EU of 27 Member States. Different countries need to find different solutions to achieve the main objectives of pension systems (poverty prevention, insurance, consumption smoothing and redistribution). Nonetheless,

⁴³ COM (2009) 58 final.

⁴⁴ COM (2006) 574 final.

policy coordination at European level provides value added in making progress towards delivering adequate, sustainable and safer pensions.